UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS

FILED

November 13, 2020

CLERK, U.S. DISTRICT COURT
WESTERN DISTRICT OF TEXAS

BY: _____ lad _____

DEPUTY

UNITED STATES OF AMERICA, *et al.*,   )
)

v.   )

INTERNAL REVENUE SERVICE, *et al.*   )

Case No. 20-cv-000362
(Sent to Clerk's Office by Facsimile and by
Federal Express on November 12, 2020)

AFFIDAVIT OF JOHN ADAMS

The Plaintiff-Relator, John Adams (formerly Jaideep S. Chawla), hereby deposes and states as follows:

1. My legal name is Jaideep S. Chawla. I identify as John Adams. I am over the age of eighteen. The following information is true and correct to the best of my knowledge, information, and belief. This Affidavit is based on my personal knowledge as well as publicly available information, including a credible allegation of voter fraud made publicly by another individual, a publicly-available statistical analysis of the election of November 3, 2020 in the State of Michigan by another individual, public records from the Secretaries of State of the State of Texas and Commonwealth of Pennsylvania, and an affidavit by another individual alleging obstruction of partisan poll watchers in the State of Michigan. I previously submitted an affidavit by facsimile to this Court concerning the vote of Denise Ondish of Allegheny County, Pennsylvania (the "Previous Ondish Affidavit"). This Affidavit includes additional information and is intended to correct and supersede the Previous Ondish Affidavit. Accordingly, copies of

the Previous Ondish Affidavit have not been put in the mail as set forth in the Previous Ondish Affidavit.

2. Based on information already provided by me to this Court, I do not believe that Barack Obama a/k/a Barry Soetoro was born in the United States of America. I believe that he forged his birth certificate and disseminated the same forged birth certificate on the official website of the White House. I believe that Barack Obama a/k/a Barry Soetoro had the means (his political machine, together with that of former presidents Clinton and Bush), motive (avoiding accountability for, among many other things, legal claims made in this case), and opportunity (the election happens every four years) to commit widespread fraud concerning the election of November 3, 2020. I believe that I will be denied access to justice and/or equal protection under the law in the event that Joseph Biden is able to fraudulently assume the Office of President of the United States.

3. According to my recollection, a poll disseminated by ABC News prior to the election of November 3, 2020 found that Joseph Biden was leading President Donald Trump in the State of Wisconsin by 17 points. I believe that this poll and other polls were deliberately skewed so as to depress turnout for votes for President Donald Trump. I believe that multiple news organizations, including CBS, ABC, NBC, CNN, MSNBC, and Fox News as well as the New York Times, Washington Post, and Boston Globe are not calling the election in the State of North Carolina for President Donald Trump in order to assist Joseph Biden in fraudulently assuming the Office of President of the United States. I believe that a similar scenario played out in the State of Alaska prior to that state being called by one or more of the same news networks.

4. On or about November 8, 2020, I became aware through media reports of a credible allegation

of voter fraud In Allegheny County, Pennsylvania concerning a deceased individual, Denise

Ondish. According to a public statement by Corey Lewandowski, whom I believe to be an

employee of the campaign of President Donald Trump, a deceased person named Denise Ondish

from Allegheny County, Pennsylvania voted in the election of November 3, 2020. According to

Corey Lewandowski's public statement, 1) on or about September 10, 1946, the same Denise

Ondish was born; 2) on or about October 22, 2020, the same Denise Ondish died; 3) on or about

October 23, 2020, an application was made to the Commonwealth of Pennsylvania for a mail-in

ballot in the name of the same Denise Ondish; 4) on or about October 24, 2020, a ballot was

mailed by the Commonwealth of Pennsylvania in the name of the same Denise Ondish; 5) on or

about November 2, 2020, the Commonwealth of Pennsylvania received the mail-in ballot in the

name of the same Denise Ondish. I have no reason to believe that the public statement

concerning the same Denise Ondish by Corey Lewandowski is false or disinformation.

5. On or about November 7, 2020, an obituary (the "Deaddeath.com Obituary") was published

on the website, deaddeath.com, purporting that the death of the same Denise Ondish occurred on

November 7, 2020. The uniform resource locator for the Deaddeath.com Obituary is:

https://deaddeath.com/death/denise-ondish-obituary-death-denise-ondish-cause-of-death-died/

6. I believe that one or more individuals authored and/or published the Deaddeath.com Obituary

to cast doubt on a valid claim of voter fraud concerning the death of the same Denise Ondish of

Allegheny County, Pennsylvania. Because the Deaddeath.com Obituary is written in what

appears to me to be broken English, I believe that there is a substantial likelihood that the author

and/or publisher of the Deaddeath.com Obituary is a foreign national.

7. On or about November 10, 2020, Dr. Shiva Ayyudarai, whom I understand to hold multiple

degrees from the Massachusetts Institute of Technology, published one or more videos (the

"Shiva Analysis") providing a statistical analysis of voting results in the State of Michigan. I

have no reason to believe the Shiva Analysis is disinformation and/or false. Based on my review

of the Shiva Analysis, I believe that there was widespread and systematic voter fraud in the State

of Michigan. I direct this Court to the approximately one hour-long video of the Shiva Analysis

by Dr. Ayyudarai at the following uniform resource locator:

https://mobile.twitter.com/va_shiva/status/1326220987608621056

8. My understanding, based on press reports and publicly available information on state election

board websites, is that voting machines and/or software provided by the Canadian company,

Dominion Voting Systems Corp., were used in the States of Georgia and Michigan and in the

Commonwealth of Pennsylvania in the election of November 3, 2020. According to the

company's website, Dominion Voting Systems Corp. provides voting machines and/or software

to 28 states in the United States.

9. The State of Texas has on multiple occasions formally rejected Dominion Voting Systems

Corp. voting machines and/or software to be used in elections held in the State of Texas. I have

included a published report concerning voting machines and/or software from Dominion Voting

Systems Corp. from the Secretary of State of the State of Texas entitled, "Voting System

Examination of Dominion Voting Systems Democracy Suite 5.5-A," attached hereto at <u>Exhibit</u> <u>1</u>.

10. On or about January 17, 2019, the Secretary of State of the Commonwealth of Pennsylvania published the "REPORT CONCERNING THE EXAMINATION RESULTS OF DOMINION VOTING SYSTEMS DEMOCRACY SUITE 5.5A WITH IMAGECAST® X BALLOT MARKING DEVICE (ICX-BMD), IMAGECAST PRECINCT OPTICAL SCANNER (ICP), IMAGECAST CENTRAL STATION (ICC), AND DEMOCRACY SUITE EMS (EMS)" (hereinafter, the "Pennsylvania Report," attached hereto at <u>Exhibit 2</u>). The Pennsylvania Report includes a certificate of conformance (the "Federal Conformance Certificate") from the United States Election Assistance Commission that details a variety of specific feature requests added to the standard Dominion Voting Systems Corp. product (Democracy Suite 5.5A) for the Commonwealth of Pennsylvania. The Federal Conformance Certificate, on page 9, states that "[o]perators can examine a blank ballot, re-mark if needed and allowed, and then re-scan it." I believe that the foregoing feature allows for potential fraud by allowing for voting system operators in the Commonwealth of Pennsylvania to fabricate ballots and insert them into voting machines provided by Dominion Voting Systems Corp.

11. I believe that electronic voting machines and/or software provided by the Canadian company, Dominion Voting Systems Corp., were used to rig the results in the State of Michigan in the election of November 3, 2020.

12. I believe that electronic voting machines and/or software provided by the Canadian company, Dominion Voting Systems Corp., were used to rig the results in the Commonwealth of Pennsylvania in the election of November 3, 2020.

13. I believe that electronic voting machines and/or software provided by the Canadian company, Dominion Voting Systems Corp., were used to rig the results in the State of Georgia in the election of November 3, 2020.

14. According to an affidavit dated November 8, 2020 filed by Zachary Larsen in the Circuit Court for the County of Wayne of the State of Michigan (hereinafter, the "Larsen Affidavit," attached hereto at Exhibit 3), partisan poll watchers were precluded from meaningfully inspecting the ballot counting process in the State of Michigan in the election of November 3, 2020. I believe that similar circumstances of partisan poll watchers being denied access to ballot counting occurred in the State of Georgia and Commonwealth of Virginia in the election of November 3, 2020. I believe that the obstruction of partisan poll watchers in the election of November 3, 2020 is indicia of fraud, because such obstruction was contrary to the applicable state law and would be a necessary component in perpetrating substantial election fraud.

15. According to a July 13, 2019 report by the Associated Press, more than 10,000 election jurisdictions in the United States, including multiple counties in the Commonwealth of Pennsylvania, were using Microsoft Windows 7 or an older operating system on machines used to administer elections. As of July 13, 2019, according to Microsoft's website, Microsoft Windows 7 was no longer supported and security patches were no longer being provided by

Microsoft for Windows 7 or older Windows operating systems. It is common knowledge that

using outdated and/or unpatched software presents significant cyber security risks.

16. Based on the timing and sequence of events, I believe that the COVID-19 virus was

intentionally released by one or more of the defendants as a ploy to preclude partisan poll

watchers from being within six feet of officials who are or were counting votes in the election of

November 3, 2020. I believe that the defendant, Barack Obama, telegraphed a portion of this

strategy from the White House in an interview with National Public Radio after the presidential

election of 2016. The uniform resource locator for this interview is:

https://www.npr.org/2016/12/19/504998487/transcript-and-video-nprs-exit-interview-with-

president-obama

17. On November 3, 2020, the Atlanta Journal Constitution reported that a pipe burst at a

location in Fulton County, Georgia. According to the same article, absentee ballots were being

counted at this location and the purported pipe burst required that the counting of absentee

ballots cease. According to the same article, the purported pipe burst occurred at State Farm

Arena in Atlanta, Georgia, which is in Fulton County. My understanding is that the Atlanta

Hawks professional basketball team operates in and plays at the State Farm Arena. According to

the website of the Secretary of State of the State of Georgia, the State of Georgia conducted early

voting at the arena for the Atlanta Hawks in Atlanta, Georgia. I believe that the purported pipe

burst was a cover story to delay the counting of votes in one or more jurisdictions in the State of

Georgia so that those perpetrating voter fraud would have enough time to ascertain the number

of fraudulent ballots required to steal the election in the State of Georgia.

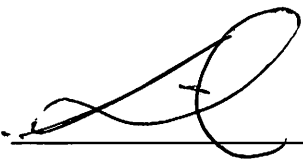I state the foregoing under the pains and penalties of perjury.

JOHN ADAMS (formerly Jaideep Singh Chawla)
PRO SE
[Address intentionally omitted and obfuscated
due to death threats as set forth in the Complaint]

DATED: November 12, 2020

ON THIS 12TH DAY OF NOVEMBER, 2020, BEFORE ME PERSONALLY APPEARED
THE INDIVIDUAL WHOSE DATE OF BIRTH IS JULY 7, 1985, WHOSE LEGAL NAME IS
JAIDEEP SINGH CHAWLA AND WHO IDENTIFIES AS JOHN ADAMS, WHO IN MY
PRESENCE DID EXECUTE THE FOREGOING AFFIDAVIT, AND WHO, BEING DULY
SWORN, DEPOSES AND STATES THAT HE HAS READ THE FOREGOING AFFIDAVIT
AND KNOWS THE CONTENTS THEREOF, AND THAT THE SAME IS TRUE OF HIS
OWN KNOWLEDGE AND BELIEF, EXCEPT AS TO THOSE MATTERS WHICH HE
STATES TO BE ON INFORMATION AND BELIEF AND AS TO THOSE MATTERS
WHICH HE BELIEVES TO BE TRUE.

NOTARY PUBLIC

Stephen D. Milburn
Notary Public
Cumberland County, NC
My Commission Expires 02-18-2022

CERTIFICATE OF SERVICE

I, John Adams (formerly Jaideep Singh Chawla), hereby certify that on this day I served the foregoing document by first class mail on the following:

Gregg Sofer
United States Attorney, Western District of Texas
U.S. Attorney's Office
903 San Jacinto Blvd., Suite 334
Austin, Texas 78701

JOHN ADAMS (formerly Jaideep Singh Chawla)

DATED: November 12, 2020

EXHIBIT 1

Voting System Examination of Dominion Voting Systems Democracy Suite 5.5-A

Brian Mechler, Technical Examiner
Exam Dates: October 2-3, 2019
Report Date: November 3, 2019

1   Background

An examination of the Dominion Voting Systems Democracy Suite (D-Suite) 5.5-A was conducted at the Texas Secretary of State Elections Division offices on October 2-3, 2019. D-Suite 5.5-A is a comprehensive voting system which consists of the following components [1][2]:

- Election Management System (EMS) – the set of client and server applications and hardware used to define and manage elections including the tabulation and reporting of results.

- Adjudication – EMS server and client components responsible for ballot adjudication as well as reporting and generation of adjudicated result files.

- ImageCast Central (ICC) - A ballot scan tabulator and associated ballot processing application for use in central elections offices.

- ImageCast Precinct (ICP) - An optical scan ballot tabulator for use at polling places.

- ImageCast X (ICX) Ballot Marking Device (BMD) – Commercial off-the-shelf (COTS) hardware and operating system, which utilizes custom applications to act as a BMD.

The Election Assistance Commission (EAC) certification includes tables that describe in detail the voting system software components, voting system platforms, and hardware components. [3].

On June 20, 2019, the State of Texas denied certification of Dominion Voting Systems D-Suite 5.5 [4]. This denial was based on findings from the January 16-17, 2019 examination for which I was present [5]. Development of D-Suite 5.5-A was already complete by the time Dominion received feedback from the January exam of D-Suite 5.5. Thus, none of the changes in D-Suite 5.5-A were intended to address the issues raised during the January exam. The following is the complete list of changes between D-Suite 5.5-A and 5.5 [6]:

- "Modification to ICX straight party behavior to show a modal pop-up window when a voter attempts to undervote a partisan contest after selecting a partisan choice in the straight party contest; the pop-up clarifies that the voter needs to remove their straight-party vote and manually vote all partisan contests if they wish for one or more of those contests affected by the straight party vote to be undervoted"

- "Updated default ICX localizations to change wording of final voter session wording to reflect that the ballot is being printed rather than cast"

- "Removed the ICX DRE configuration as it was not required by the State of Pennsylvania"

- "Removed the ICX Classic 15" model for marketing purposes"

- "Used MCF v5.5.10.19 (EMS 5.5 default configuration file for the ICX) as changes to MCF v5.5.10.20 from D-Suite 5.5 were related to VVPAT printer component and not relevant to the 5.5-A system configuration"

In addition to the above changes, D-Suite 5.5-A significantly reduced the number of hardware configurations available compared to D-Suite 5.5.

- The Express EMS hardware configuration is not offered, only the Standard client-server configuration.

- The ICX Prime BMD is the only available voting machine; all ICX Classic platforms, ICX Prime DRE, and ICX Prime DRE with VVPAT are not within the scope of certification for D-Suite 5.5-A.

The Secretary of State Elections Division obtained the software and firmware (FW) images used in the EAC certification directly from the EAC. Dominion personnel used those same files to perform installation under the supervision of the technical examiners. In [7], Dominion provides instructions for the identification and verification of the components included in D-Suite 5.5-A.

The examination also consisted of an accessibility test, vendor presentations and demos, a mock election, and a free-form session where examiners could ask follow-up questions and use the voting equipment in an unscripted manner.

I was not present for the accessibility portion of the exam. ADA compliance will be presented in the legal examiners' reports. A detailed description of the Texas Secretary of State examination, including my observations, concerns, and recommendations, is presented in the sections that follow.

2   Election Management System

The EMS is the set of client and server hardware and associated software used in pre-voting and post-voting activities.

The Standard EMS configuration is the only one available in D-Suite 5.5-A. The Standard configuration consists of a Dell PowerEdge R640 Server and one or more Dell Precision 3431 Workstations [8]. The server uses Microsoft Windows Server 2012 R2 as its OS and the workstations run on Microsoft Windows 10 Professional.

The server is configured with dual 1-TB hard drives in RAID 1 mode and four 1-TB hard drives in RAID 10 mode for data redundancy.

The server, EMS workstations, and ICC workstation communicate over a network switch that is provided by Dominion. The server host operates a DHCP server with a static pool of IP addresses. The

EMS system must be operated within its own isolated private network (i.e. not connected to any public or other internal networks). It should connected only to other components of the certified configuration.

The EMS system creates media for the voting and tabulating equipment. CFast cards are used to load election definitions on to the ImageCast Precinct. USB thumb drives are used to load election definitions on to the ICX BMD. The EMS system also creates iButton keys and SmartCards for two-factor authentication.

Backend applications and services are installed on the server hardware, and end-user applications (and some supporting services) are installed on the client workstations. In [2], Dominion describes the major software components:

- EMS Adjudication - "Server and client components responsible for adjudication, including reporting and generation of adjudicated result files from ImageCast Central tabulators."

- EMS AIMS Data Translator - "End-user application that transfers election definitions   from Democracy Suite to EMS to AIMS, enabling users to program AutoMARK devices   for ImageCast ballots."

- EMS Application Server - "Server side application responsible for executing long running processes, such as rendering ballots, generating audio files and election files, etc."

- EMS Audio Studio - "End-user helper application used to record audio files for a given election project. As such, it is utilized during the pre-voting phase of the election cycle."

- EMS Data Center Manager - "System level configuration application used in EMS back-end data center configuration."

- EMS Database Server - "Server side RDBMS repository of the election project database which holds all the election project data, including pre-voting and post-voting data."

- EMS Election Data Exchange Station (EDES) - "End-user helper application used to program the memory cards and iButton security keys required to properly operate the ImageCast series of counting devices. As such, it is utilized during the pre-voting phase of the election cycle."

- EMS Election Data Translator - "End-user application used to export election data   from election project and import election data into election project."

- EMS Election Event Designer - "Integrates election definition functionality together with ballot styling capabilities and represents   a main pre-voting phase end-user application."

- EMS File System Service - "Stand-alone service that   runs on client machines, enabling access to low level operating system API for partitioning CF cards, reading raw partition on ICP CF card, etc."

- EMS NAS Server - "Server side file repository of the election project file based artifacts, such as ballots, audio files, reports, log files, election files, etc."

- EMS Results Tally and Reporting - "Integrates election results acquisition, validation, tabulation, reporting, and publishing capabilities and represents a main post-voting phase end-user application."

- EMS Result Transfer Manager - "Stand-alone application used to transfer result files from the remote locations to one or more central locations where the results can be tallied and reported on."

- EMSLogger - "a stand-alone application that runs on client or server machines and is used to gather diagnostics for troubleshooting."

- Smart Card Helper service - "Installed on a workstation or laptop at the polling place, and provides required data format for programming smart cards for ImageCast devices, or, for jurisdiction's voting registration system in case of integration."

- ImageCast Voter Activation application - Installed on a workstation or laptop at the polling place, that allows the poll workers to program smart cards for voters. The smart cards are used to activate voting sessions on ImageCast X."

Version numbers for the D-Suite 5.5-A EMS software components are the same as those included with D-Suite 5.5 [3][9].

2.1 Observations

The use of most of the EMS software components was not directly observed by examiners during the mock election and free-form portion of the exam. The following subsections will cover the installation process and components which were directly observed or responsible for issues during the exam.

2.1.1 Installation

Examiners witnessed Dominion personnel install the server and client software components. The installation process is very complex and requires the manual entry of certain paths and host names. Dominion provides a custom installation helper application which allows the user to navigate to and launch installers for individual components. Those components are not necessarily presented in order within the installation helper application. There is a point during the install process where the user must divert from using Dominion's custom installer to install certain 3rd party prerequisites from DVD. Users must take great care to follow the exact installation instructions provided by Dominion. Though hyperlinks are provided in the documentation to help the user navigate from one step to the next, instructions are not presented in order within the documentation and, in fact, are spread across multiple documents.

A problem was encountered during the installation of Adjudication Services on the server. The only way to resolve this issue was to wipe the server clean with a fresh installation of the operating system (as well as all of the prerequisites up to that point). According to Dominion personnel, the server hardware should have been rebooted prior to installing Adjudication services. As a result of missing that step, the installation of the EMS was delayed by hours.

2.1.2   Election Event Designer (EED)

The Secretary of State's office provided Dominion with election data for the mock election portion   of the exam. Prior to the exam, Dominion used EED to create paper ballots as well as election definitions for the ICC, ICP, and ICX. The election definition for the ICX includes the touchscreen representation of the ballot.

Aside from the misspelling of one candidate's name, there were no issues with the paper ballot. However, the touchscreen ballot had multiple errors beyond the simple spelling mistake. Party affiliations were no listed next to candidate's names, voting instructions specific to each contest were missing, and ballot proposition language was missing. In addition, the wording of the instruction on the final screen of the ballot instructed the voter to "cast" their ballot instead of printing it. Note that this was one of the very small number of changes that was supposed to have been picked up in this revision of D-Suite.

When asked, Dominion stated that this election definition had been put through an internal logic and accuracy (L&A) test prior to the exam. Yet none of these issues were caught.

After the mock election portion of the exam, Dominion personnel created a new election definition to show that they could fix all of the errors and misconfigurations, and it appeared that they did.

Similar to the install process, it appears that EED is overly complex and fragile. Many troubling questions come to mind. If Dominion personnel, theoretically the most expert users of this software, can create an election definition with so many glaring errors, how error-prone will the system be for jurisdictions that opt to create their own election definitions? What level of service will jurisdictions receive if they outsource the creation of election definitions to Dominion? One would assume that a certification exam sets the benchmark for the quality of service vendors provide to jurisdictions.

2.1.3   Adjudication

Examiners adjudicated hand marked ballots scanned on the ImageCast Central. The Adjudication user interface displays the scanned ballot image and highlights the machine interpretation of voter intent in green (see Figure 1). These green bars were occasionally offset from where the chosen candidates appeared on the ballot creating a confusing and frustrating user experience (see Figure 2). The highlighting feature can be disabled should users find it to be counterproductive.

In the January exam of D-Suite 5.5, examiners witnessed a crash of Adjudication Services   due ostensibly to a misconfigured path. The crash of Adjudication Services required the readjudication of all previously adjudicated ballots. This issue did not occur during the exam of D-Suite 5.5-A. However, since there were no changes made to the Adjudication software, this issue could arise again.

Figure 1: Properly Aligned Visual Aid
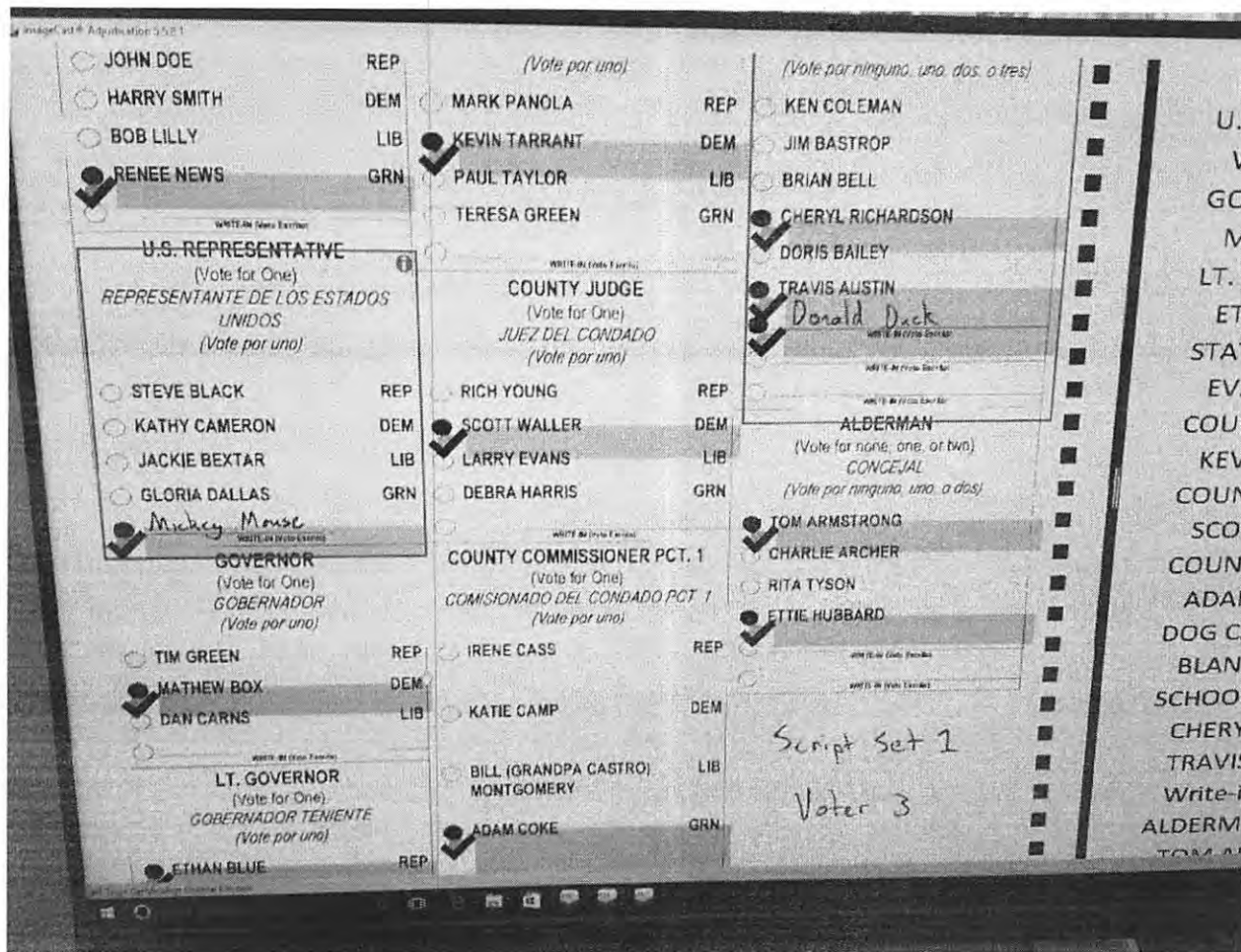
Figure 2: Misaligned Visual Aid

2.1.4   Results Tally and Reporting (RTR)

RTR was used to tally votes and produce reports from the mock election. No issues were observed. Votes were tallied and reported accurately.

3   Scanners

D-Suite 5.5-A includes two ballot scanners. The ImageCast Central (ICC) is for use at the jurisdiction's central office and is typically used to scan mail-in ballots. ImageCast Precint (ICP) is a polling place scanner. The ICC and ICP can both process hand-marked and machine-marked ballots.

3.1 ImageCast Central

The ICC utilizes a COTS Canon DR-G1130 scanner connected to a Dell Optiplex 3050 AIO Workstation. The workstation runs Windows 10 (64-bit) Professional edition as its OS. The ICC workstation can be connected over the isolated private network to the EMS server. If connected to the server, the ICC can be configured to save scanned ballot images and cast vote records (CVRs) on both the ICC workstation and the EMS server.

The Canon DR-G1130 has a feeder capacity of 500 sheets. It can scan one hundred 8.5"x11" pages per minute. Ballot stock in lengths ranging from 11" to 22" can be used.

An iButton security key is required for two-factor authentication, decryption of election files, and encryption of results files.

The ICC can be configured to reject ballots that have issues, such as ambiguous marks and under/over votes.

3.1.1 Observations

Examiners observed the installation of the ICC workstation software and there were no notable issues with this process.

During the mock election, examiners observed the processing of ballots through the ICC. The ICC properly rejected ballots that did not meet the criteria of the loaded configuration. There is some latency between the scanning of the ballot and the detection of an issue. As a result, a handful of ballots are scanned subsequent to the problem ballot. However, the ICC workstation application correctly informs the user of how many ballots need to be rescanned. The ICC jammed once during the processing. When the ICC encounters a paper jam, the entire batch must be rescanned.

3.2 ImageCast Precinct

The ICP is a custom hardware device with a scanner, integrated thermal printer, and LCD touchscreen. When a voter is finished marking their ballot (either by hand or using the ICX BMD), they insert it into the ICP where it is scanned and deposited into the ballot box. The ICP can read ballots in any orientation. It can be configured to reject ballots that have issues such as ambiguous marks and under/over votes.

Firmware is loaded from a CFast card along with an iButton Administrator key for authentication. Different iButton keys are required for other roles and actions. The iButton Administrator key is provided by Dominion and color-coded so that it is not accidentally confused with keys that are reprogrammed across elections.

Election definitions are loaded via CFast cards and stored in internal memory. CVRs and scanned images are stored on two CFast cards for data redundancy. Redundancy between the two cards is checked after each file write and if the cards ever fall out of sync, the ICP will cease to operate as a tabulator until the issue is resolved.

3.2.1 Observations

Examiners witnessed the installation of ICP firmware. The installation required the use of an iButton Administrator key. The PIN associated with the iButton Administrator key is only 1-digit long and cannot be changed. Dominion should at the very least make the PIN more complex and preferably issue keys protected by unique PINs.

The FW installer provides an option to install older versions of the ICP FW. According to Dominion, this feature exists to support the recount of an election conducted under an older version. The problem

with this feature is that jurisdictions would have the ability to install FW that has not received certification in Texas. This is an unnecessary convenience that risks the use of a non-certified system in an election. If jurisdictions have purchased older, certified versions of D-Suite, they should already have the FW install files for that particular version. Alternately, they should be able to obtain those files from Dominion.

During the free-form session of the exam, one of the examiners scanned a paper ballot with an ambiguous ballot mark. The ICP properly rejected the ballot, but the error messaged flashed so quickly across the LCD screen that examiners could not easily determine the reason for rejection. When a ballot is rejected, the error message should persist on the LCD screen so the voter and/or poll worker can determine what went wrong and resolve the issue.

Two different ballot box configurations were demonstrated. Both configurations provided adequate ballot security.

Two identical ICP scanners were in use during this exam. Though D-Suite 5.5-A uses the same ICP FW and HW as D-suite 5.5, examiners did not encounter issues with paper jams and poor quality images this time around. Dominion's best guess for the poor performance during the D-Suite 5.5 exam was that the ICP unit used was defective or damaged during shipping.

4   ImageCast-X Ballot Marking Device

The ICX BMD consists of custom software running on COTS hardware (Avalue HID-21V-BTX). The Avalue tablet runs the Android 5.1 OS. The tablet is connected to a HP M402dne COTS printer and optionally an audio-tactile controller and LED indicator light.

Two-factor authentication is role-based and accomplished via ACOS-6-64 SmartCards. The SmartCards authenticate one of three roles; Technician, Poll Worker, and Voter.

Technician cards are used when loading the ICX applications on the tablet and when loading the election definition files. Election definition files are stored on USB thumb drives; the election definition files are not transferred to the tablet's internal memory. EED is capable of programming Technician cards. A Technician card does not grant access to election day related functions.

Poll Worker cards are programmed by EED. They give poll workers the ability to open/close polls, extract audit logs, perform diagnostics tests, and manually activate voting sessions for voters. Election definitions are encrypted when first loaded. Poll Worker cards hold the decryption key which decrypts the election definition upon their first use. Every time a Poll Worker card is used, it verifies the digital signature of the loaded election definition.

The Voter card is typically programmed at the polling place by poll workers using an ImageCast Voter Activation workstation (a piece of hardware that is outside the scope of this certification exam). The Voter card is provided to voters so they can activate their own voting sessions. The Voter card only activates the ballot specific to the voter's precint. After it has been used to print a ballot, the Voter card cannot be used again until it has been reprogrammed by a poll worker.

4.1 Observations

Installation of the ICX application by Dominion personnel was witnessed by the examiners. A Technician card is required to install the ICX application. A Technician card is notrequired to install other applications. The technician must manually put the ICX tablet in kiosk mode after installing the ICX application. If one has access to ICX data ports, kiosk mode the only thing preventing someone from installing non-certified software. Only a user with Technician card credentials can take the ICX out of kiosk mode. In this exam, and in the January D-Suite 5.5 exam, Dominion personnel failed to place voting machines in kiosk mode after installing the ICX application. This critical step needs to receive greater focus in Dominion's internal training.

Examiners used the ICX BMD to mark ballots during the mock election. The touchscreen user interface is intuitive and easy to navigate. Any difficulty experienced marking a ballot was due to the misconfigured election definition (detail provided in Section 2.1.2).

In my report of the D-Suite 5.5 exam, I found that hasp seals insufficiently secured the doors protecting data and network ports. During the 5.5-A exam, Dominion recommend the use of tamper-evident adhesive seals to secure the doors. This is a very good recommendation. In fact, the same recommendation can be found in the ICX System Operation Procedures manual [12]. However, the ICX User Guide [13] is vague on whether adhesive seals should be used in addition to hasp seals. With regard to securing the doors, the Democracy Suite System Security Specification [14] simply refers the reader to the COTS manual [15]. The Avalue HID-21V-BTX manual only recommends hasp seals to secure the doors. Dominion needs to provide consistent guidance across all of their documentation regarding physical security of ICX devices.

A new hardware peripheral in the form of a COTS LED indicator light was demonstrated. The LED indicator provides voting system status to poll workers without violating the privacy of voters. In theory this would be a welcome feature. Unfortunately, this new peripheral exposed a secured USB port. The LED light is controlled by a detachable USB-C cable (see Figure 3). In [16], Dominion recommended two mitigation options (I recommend the latter):

- "Seal the connection between the LED light and the USB cable"
- "Remove the LED light from the Texas configuration altogether"

One issue with relying heavily on COTS equipment in the polling place is that often the end-use is not envisioned by the original COTS product designers. The Avalue tablet is a good example of this disconnect. Door 3 of the device secures DC in/out ports, the power button, and a USB port. Due to the presence of the USB port, this door must be sealed at all times during an election. During early voting, poll workers will have to break and replace this seal at the beginning of each day to power on the device.

It was discovered during an informal test that if a USB peripheral were added while the Avalue device was powered off, users of ICX (even those with Poll Worker card access) would not bemade aware of the configuration change. The "Hardware Details" diagnostic provided by the Poll Worker menu only checks the status of defined peripherals (i.e. the printer, LED, and audio-tactile interface). Audit logs can be viewed on-screen, but those logs do not contain the level of detail necessary to discover the

presence   of anon-certified device. Only the system logs capture enough detail to detect the addition   of non-certified USB devices. The system logs are   notypically exported and examined each day during early voting.

In the 5.5-A configuration, the ICX can only be operated in BMD mode; thus it does   notcreate or store CVRs. It's unlikely someone could significantly alter the outcome of an election via this vulnerability (assuming voters carefully review their marked ballots). However, voter confidence in elections systems is   acritical component of democracy. Evidence of tampering on even one system undermines this confidence. After this discovery, Dominion recommended the use   of aserialized port lock   or a non-residue tape seal to secure the USB port behind Door 3 [16].
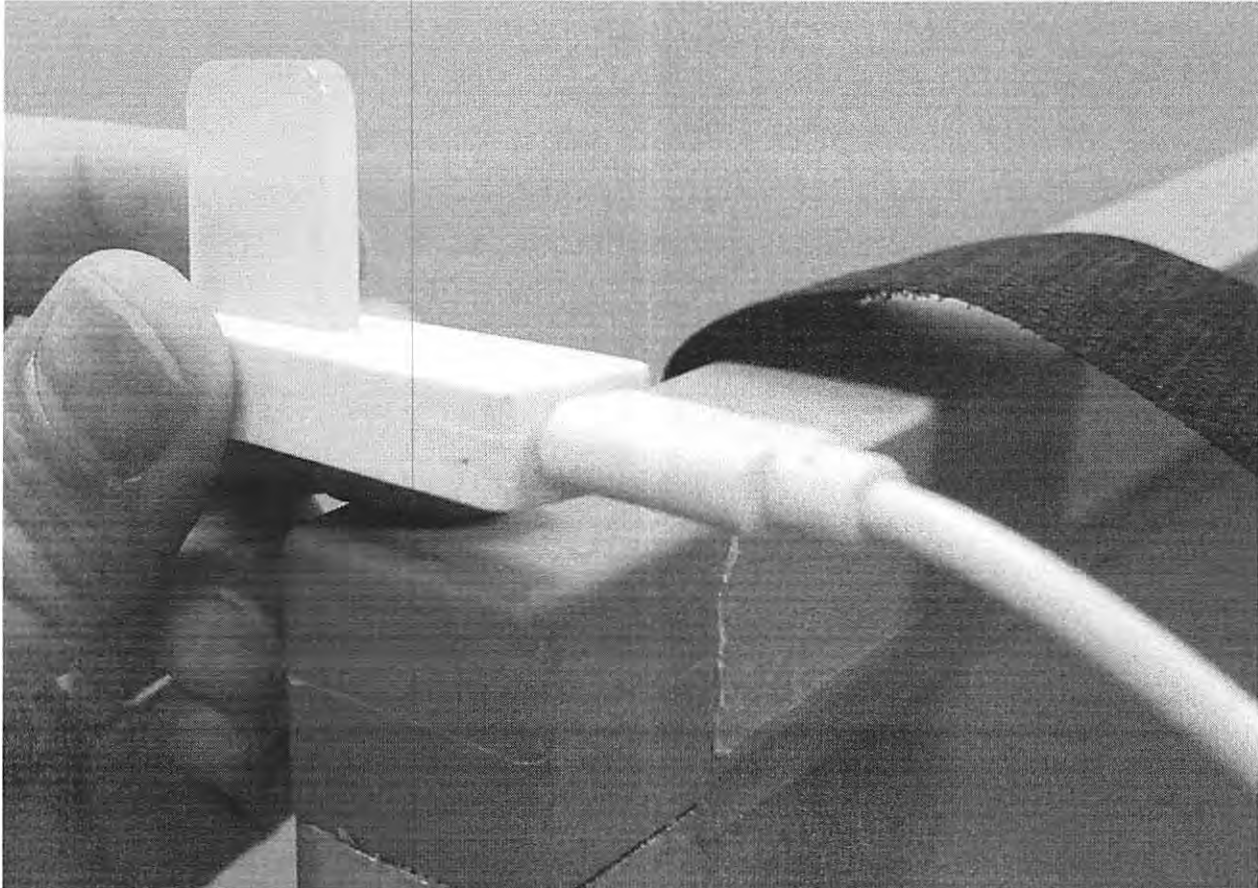
5   ImageCast Voter Activation (ICVA)

ICVA is an application that runs on a laptop or workstation located at the polling place. It is used to program Voter SmartCards that can activate voting sessions on ICX devices.

5.1 Observations

The ICVA software and hardware are not within the scope of this certification exam. My observations of this component will have no bearing on my recommendations regarding D-Suite 5.5-A. Nevertheless, examiners witnessed the installation and use of this application. No issues were observed. In general, voter activation stations such as ICVA can allow for a more streamlined polling place and reduce the burden on poll workers.

6   Conclusions

Multiple major issues are present in D-Suite 5.5-A (enumerated below):

1. Complexity and fragility of the EMS installation process

2. Complexity and fragility of the Election Event Designer revealed by multiple errors in the Dominion generated election definition file for the ICX BMD

3. Inability to gracefully recover from a crash of Adjudication Services (no crashes were witnessed in this exam, but this EMS software component is identical to the one in D-Suite 5.5)

4. Easily cracked PIN on Technician iButton key

5. ICP installer allows installation of non-certified firmware

6. ICP's unclear and buggy behavior in response to an ambiguous mark on a hand-marked ballot

7. ICX LED indicator exposes an otherwise secured data port

8. Unclear and insufficient guidance in technical data package regarding physical security of ICX

In aggregate, Issues 1-3 and prevent D-Suite 5.5-A from meeting Texas Voting System General Requirement 122.001(a)(2): "Must be suitable for the purpose for which it is intended."

In aggregate, Issues 1-3 and Issue 5 prevent D-Suite 5.5-A from meeting Texas Voting System General Requirement 122.001(a)(3): "Operates safely, efficiently, and accurately and complies with the voting system standards adopted by the EAC."

If operated properly, D-Suite 5.5-A could be a system that operates safely, efficiently, and accurately. However, we have not yet witnessed that even Dominion's own subject matter experts can operate the system properly. To be clear, the above statement is not an indictment of Dominion personnel. I found the representatives at the exam to be courteous, professional, knowledgeable, and eager to answer examiners' questions and resolve issues. It is the EMS system itself that is difficult to work within.

Issues 4, 7, and 8 prevent D-Suite 5.5-A from meeting Texas Voting Systems General Requirement 122.001(a)(4): "Is safe from fraudulent or unauthorized manipulation."

Many of these issues could be resolved by placing conditions on the certification of D-Suite 5.5-A.

- Require that Dominion deliver EMS to customers on pre-imaged drives (resolves Issue 1)

- Require that Administrator iButton key be protected by sufficiently complex PIN (resolves Issue 4)

- Remove non-certified firmware versions from ICP installer (resolves Issue 5)

- Remove the ICX LED peripheral from the Texas certification (resolves Issue 7)

- Update documentation to provide clear and consistent guidance regarding physical security best practices (resolves Issue 8)

Ultimately, this set of conditions is too large to be considered de minimis. I recommend against certification of Dominion Voting Systems Democracy Suite 5.5-A.

7   References

[1]   Application for Texas Certification of Voting System – Form 100, Signed Aug-28 2019

[2]   Democracy Suite System Overview, Version 5.5-A::155, Dec-12 2018

[3]   United States Election Assistance Commission Certificate of Conformance Dominion Voting Systems Democracy Suite 5.5-A, EAC Certification Number DVS-DemSuite5.5-A, Jan-30 2019 URL: https://www.eac.gov/voting-equipment/democracy-suite-55-a-modification/

[4]   J. A. Esparza, "Report of Review of Dominion Voting Systems Democracy Suite 5.5", Jun-20 2019, URL: https://www.sos.state.tx.us/elections/forms/sysexam/dominion-democracy-suite-5.5.pdf

[5]   B. J. Mechler, "Voting System Examination of Dominion Voting Systems Democracy Suite 5.5", Feb-15 2019, URL: https://www.sos.state.tx.us/elections/forms/sysexam/jan2019-mechler.pdf

[6]   Democracy Suite System Change Notes, Version 5.5-A::155, Dec-13 2018

[7]   Democracy Suite System Identification Guide, Version: 5.5-A::334, Dec-19 2018

[8]   D-Suite 5.5-A (TX) Component List, Oct-18 2019

[9]   United States Election Assistance Commission Certificate of Conformance Dominion Voting Systems Democracy Suite 5.5, EAC Certification Number DVS-DemSuite5.5, Sept-18 2018 URL: https://www.eac.gov/voting-equipment/democracy-suite-55/

[10]   Democracy Suite ImageCast Central Functionality Description, Version 5.5-A::180, Dec-12 2018

[11]   Democracy Suite ImageCast Precinct Functionality Description, Version 5.5-A::176, Dec-12 2018

[12]   Democracy Suite ImageCast X System Operations Procedures, Version 5.5-A::85, Dec-12 2018

[13]   Democracy Suite ImageCast X User Guide, Version 5.5-A::252, Dec-12 2018

[14]   Democracy Suite System Security Specification, Version 5.5-A:563, Dec-12 2018

[15]   Avalue HID-21V-BTX-A1R User Manual, Avalue Technology Inc., Feb-2 2018

[16]   Texas Certification Response, Correspondence from Dominion Voting Systems to Charles Pinney, Oct-30 2019

EXHIBIT 2

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF STATE

REPORT CONCERNING THE EXAMINATION RESULTS OF DOMINION VOTING SYSTEMS DEMOCRACY SUITE 5.5A WITH IMAGECAST® X BALLOT MARKING DEVICE (ICX-BMD), IMAGECAST PRECINCT OPTICAL SCANNER (ICP), IMAGECAST CENTRAL STATION (ICC), AND DEMOCRACY SUITE EMS (EMS)

Issued By:

Kathy Boockvar
Acting Secretary of the Commonwealth
January 17, 2019

EXAMINATION RESULTS OF DOMINION VOTING SYSTEMS DEMOCRACY SUITE 5.5A WITH IMAGECAST® X BALLOT MARKING DEVICE (ICX-BMD), IMAGECAST PRECINCT OPTICAL SCANNER (ICP), IMAGECAST CENTRAL STATION (ICC), AND DEMOCRACY SUITE EMS (EMS)

I.   Introduction

Article XI-A of the Pennsylvania Election Code, 25 P.S. §§ 3031.1 *et seq.,* authorizes the use of electronic voting systems. Section 1105-A of the Pennsylvania Election Code, 25 P.S. § 3031.5, requires that the Secretary of the Commonwealth (Secretary) examine all electronic voting systems used in any election in Pennsylvania and that the Secretary make and file a report stating whether, in his opinion, the electronic voting system can be safely used by voters and meets all applicable requirements of the Election Code.

Upon the request of Dominion Voting Systems Inc. (Dominion), the Department of State's Bureau of Commissions, Elections and Legislation (Department) scheduled an examination for October 15, 2018 of the Democracy Suite 5.5 voting system. The voting system presented for certification in Pennsylvania included the Democracy Suite Election Management System (EMS) election management software used in conjunction with the following components: 1) ImageCast® X (ICX) Ballot Marking Device (BMD), a ballot marking device with Commercial Off The Shelf (COTS) printer, HP LaserJet Pro Printer M402dn/HP LaserJet Pro Printer M402dne, for printing marked ballots; 2) ImageCast Precinct Scanner (ICP), a precinct optical scan ballot tabulator that scans, validates and tabulates hand-marked paper ballots and ballots produced on the BMD; and 3) ImageCast Central Station (ICC), a ballot scanning and tabulating system that can be configured with high speed COTS scanners Canon Image Formula DR-G1130 /Canon Image Formula DR-M160-II to tabulate ballots in central office.

The Secretary appointed SLI Global Solutions (SLI) and the Center for Civic Design (CCD) as professional consultants to conduct the examination of Democracy Suite 5.5. The examination process included a public demonstration and functional examination (functional examination), accessibility examination and security testing. The functional and accessibility examinations were performed in Room G24A/B of the Commonwealth Capitol

Complex - Finance Building, 613 North Street, Harrisburg, PA 17120. Mike Santos, Senior Test Manager, and Kyle Johnson, Senior Test Engineer (Functional Examiner), of SLI Global Solutions, conducted the functional examination of the Democracy Suite 5.5 pursuant to Section 1105-A(a) of the Election Code, 25 P.S. § 3031.5(a). Whitney Quesenbery, Denis Anson and Michael Weisman (Accessibility Examiner), representing CCD, performed an accessibility examination of the Democracy Suite 5.5 system. The examinations commenced on October 15, 2018, and lasted approximately four days. Jonathan Marks, Commissioner of the Bureau of Commissions, Elections and Legislation; Kathryn Boockvar, Senior Advisor to the Governor on Election Modernization; Jessica Myers, Deputy Director, Office of Policy; Kathleen Kotula, Executive Deputy Chief Counsel, Office of Chief Counsel; and Sindhu Ramachandran, Voting Systems Analyst, represented the Secretary of the Commonwealth. Jessica Bowers, Director of Certification, and Matt Coffey, Systems Specialist, represented Dominion. Additional staff members from the Department also attended the examination. The functional examination was open to the public and was videotaped by Department staff. Security testing of the Democracy Suite 5.5 system was performed at SLI facilities located at 4720 Independence Street, Wheat Ridge, Colorado, prior to the functional examination. Mike Santos, Senior Test Manager, and Jesse Peterson, Security Specialist, at SLI Global Solutions, served as the Security Examiner for the Democracy Suite 5.5 security testing. The Functional Examiner and Accessibility Examiner concluded that the Democracy Suite 5.5 did not comply with Sections 1107-A(10) and (15), 25 P.S. §§ 3031.7(10) & (15), of the Pennsylvania Election Code because the ICX BMD did not allow the voter to remove all candidate selections in a contest after voting straight party and the screen referenced the process of marking and printing the ballot as "casting" the ballot. Additionally, the Security Examiner noted that the system hardening measures documented in the Technical Data Package (TDP) required additional modifications for a secure implementation.

Thereafter, Dominion incorporated corrections for the issues identified during the Democracy Suite 5.5 examination, and re-submitted the new release, Democracy Suite 5.5A, to both the U.S. Election Assistance Commission (EAC) for federal approval and the

Department for state certification. The system components remained the same and the only change in the new release was the software enhancements to remediate the identified anomalies. The Functional Examiner performed a follow-up examination of Democracy Suite 5.5A on December 5-6, 2018, at SLI Global Solutions located at in Wheat Ridge, Colorado. Department staff observed the examination via web conference. The examination was videotaped by SLI and the video is on file at the Department. The Security Examiner validated that the documentation has been updated to reflect accurate system hardening steps for a secure implementation. Since the software changes made to the Democracy Suite 5.5A system were specifically to remediate the identified anomalies in Democracy Suite 5.5, it was determined that the results of the accessibility examination and security testing conducted as part of the Democracy Suite 5.5 examination may be utilized for Democracy Suite 5.5A certification. The Department discussed the software modifications with the Accessibility Examiner, since both the straight party usability issue and usage of the word "cast" were also part of the Accessibility test findings.

II.   The Democracy Suite 5.5A Voting System

Democracy Suite 5.5A components considered for use in Pennsylvania[1] provide a paper-based voting system with end-to-end election support, from defining an election to generating final reports. The system is comprised of both precinct and central count tabulators, and BMDs as the ADA component. The system components include: the Election Management System (EMS), the ImageCast Central (ICC) - utilizing two Commercial Off the Shelf (COTS) scanners, the ImageCast Precinct (ICP) optical scanner and the ImageCast X (ICX) (Prime and Classic) ballot marking devices.

The following is a description of the Democracy Suite 5.5A components summarized from Section 2.0 (System Overview) of the Test Report for Examination of Democracy Suite 5.5A, prepared by the Functional Examiner and documentation submitted by

---

[1] The EAC certified system includes a DRE option for the ICX device which is not considered for certification in Pennsylvania.

Dominion as part of the Technical Data Package (TDP).

Election Management System (EMS)

The Dominion Democracy Suite 5.5A EMS supports elections on the ICX Prime, ICX Classic, ICP and ICC systems. The EMS set of applications are responsible for all pre-voting and post-voting groups of activities in the process of defining and managing elections. EMS software platform consists of end-user (client) and back-end (server) applications. The EMS platform consists of the following major components.

EMS Election Event Designer (EED) - Supports pre-voting activities including election definition together with ballot styling capabilities.

EMS Audio Studio (AS) - End-user helper application used to record audio files for a given election project utilized during the pre-voting phase of the election cycle.

EMS Application Server – Server-side application responsible for executing long running processes, such as rendering ballots, generating audio files and election files, etc.

EMS Results Tally and Reporting (RTR) - Integrates election results acquisition, validation, tabulation, reporting, and publishing capabilities and represents a main post-voting phase end-user application.

EMS File System Service (FSS) - Stand-alone service that runs on client machines, enabling access to low level operating system API for partitioning CF cards, reading raw partition on ICP CF card, etc.

EMS Data Center Manager (DCM) - End-user application used to export election data from election project and import election data into election project.

EMS Election Data Translator (EDT) - End-user application used to export election data from election project and import election data into election project.

EMS Adjudication (ADJ) and EMS Adjudication Service - Server and client components responsible for adjudication, including reporting and generation of adjudicated

5

result files from ImageCast Central tabulators and adjudication of write-in selections from ImageCast Precinct and Image Cast Central tabulators.

ImageCast Voter Activation (ICVA) - Installed on a workstation or laptop at the polling place, that allows the poll workers to program smart cards for voters. The smart cards are used to activate voting sessions on ImageCast X.

ImageCast X (ICX) Ballot Marking Device (BMD)

The ICX ballot marking platform is used for creation of paper cast vote records. These ballots can be scanned, reviewed, cast and tabulated at the polling location on an ICP or later scanned and tabulated by the ICC at a central location. The ICX consists of two models, ICX Prime and ICX Classic.

2.3   ImageCast Precinct (ICP)

The ICP is a hybrid precinct optical scan ballot counter designed to provide ballot scanning, ballot review and tabulation at a polling place.

2.4   ImageCast Central (ICC) Count Scanner

The ICC is a high-speed, central ballot scan tabulator based on Commercial off the Shelf (COTS) hardware, coupled with the custom-made ballot processing application software. It is used for high speed scanning and counting of paper ballots.

Manufacturer Software/Firmware

The **Dominion Democracy Suite 5.5A** voting system consists of the following software and firmware components:

Application	Version
EMS Election Event Designer (EED)	5.5.12.1
EMS Results Tally and Reporting (RTR)	5.5.12.1
EMS Application Server	5.5.12.1
EMS File System Service (FSS)	5.5.12.1
EMS Audio Studio (AS)	5.5.12.1
EMS Data Center Manager (DCM)	5.5.12.1

6

Application	Version
EMS Election Data Translator (EDT)	5.5.12.1
ImageCast Voter Activation (ICVA)	5.5.12.1
EMS Adjudication	5.5.8.1
EMS Adjudication Service	5.5.8.1
Smart Card Helper Service	5.5.12.1
ImageCast Precinct	5.5.3-0002
ImageCast Central	5.5.3.0002
ImageCast X	5.5.30

COTS Software/Firmware

Additional COTS software and firmware included in the system has been defined as part of the EAC system certification scope that will be added to this report as Attachment A once the final certification is granted for Democracy Suite 5.5A.

III.   EXAMINATION APPROACH, PROCEDURES AND RESULTS

A.   Examination Approach

To ascertain whether Democracy Suite 5.5A can be safely used by voters at elections in the Commonwealth and meets all the requirements of the Pennsylvania Election Code, the Examiners developed test protocols for the examination. The initial functional examination of Democracy Suite 5.5 held October 15 through 19, 2018, determined that the system did not comply with Sections 1107-A(10) and (15), 25 P.S. §§ 3031.7 (10) & (15). The Examiners observed the following issues:

1. The ICX-BMD did not allow a voter to deselect all choices in a contest after voting straight party when the voter attempted to do so. Instead, a warning message that required no user acknowledgment displayed above the contest indicating that their "implicit" straight party selections would remain in effect. The screen presented to the voter had all the selections deselected and when the voter printed the ballot, the paper ballot indicated votes for the candidates chosen by the straight party option.

7

The warning message wording did not clearly indicate the intent. Also, the message displayed was not intuitive enough for a voter to notice it and there was no acknowledgment action required of the voter indicating that the message was seen.

2. The ICX-BMD final screen presented to the voter indicated that the voter was about to cast their ballot, even though the voter was only printing the ballot which needs to be further scanned by the ICP or ICC.

Dominion remediated the software issues and the Examiners then performed a follow-up examination of Democracy Suite 5.5A to confirm that the anomalies identified in Democracy Suite 5.5 were corrected and the system complies with all the requirements of the Pennsylvania Election Code. The examination approach followed for Democracy Suite 5.5 and Democracy Suite 5.5A is discussed in the below sections.

Democracy Suite 5.5 Examination Approach

Functional Examination

The test protocols separated the requirements of Article XI-A of the Pennsylvania Election Code, Sections 1101-A to 1122-A, 25 P.S. §§ 3031.1 - 3031.22, into six main areas of test execution: (1) Source Code Review; (2) Documentation Review; (3) System Level Testing; (4) Security/Penetration Testing; (5) Privacy Analysis; and (6) Usability Analysis.

Source Code Review was performed prior to the functional examination to determine if there were any vulnerabilities found that would warrant additional security examination.

Documentation Review was performed to verify that the portions of the Pennsylvania Election Code, which reference documentation detail, are sufficiently met by the Dominion Democracy Suite 5.5 documentation. The Functional Examiner validated compliance of the system to the following sections of the Election Code during the documentation review.

- 1105-A(a), 25 P.S. § 3031.5(a), requiring that an electronic voting system has been examined and approved by a federally recognized ITA;

- 1107-A(11), 25 P.S. § 3031.7(11), requiring an electronic voting system to be suitably designed in terms of usability and durability, and capable of absolute

accuracy;

- 1107-A(13), 25 P.S. § 3031.7(13), requiring an electronic voting system to correctly tabulate every vote;

- 1107-A(14), 25 P.S. § 3031.7(14), requiring an electronic voting system to be safely transportable; and

- 1107-A(15), 25 P.S. § 3031.7(15), requiring an electronic voting system to be designed so voters may readily understand how it is operated.

System Level Analysis examined the Dominion Democracy Suite 5.5 voting system by conducting an election starting with creating an election definition using EMS and then creating the election media needed to populate the voting devices (the ICX - Classic and Prime with COTS printer HP LaserJet Pro Printer M402dn, ICP, ICC with COTS scanners - Canon DR-G1130 and Canon DR-M160-II). Ballots were marked, manually as well as via both models (Classic and Prime) of the ICX ballot marking device, and tabulated through the ICP and ICC (both COTS scanners). The results reports were validated against the expected results of the voted ballots. All components of the Democracy Suite 5.5 system were exercised to verify that they met all pertinent requirements of the Pennsylvania Election Code. The test cases were designed to ascertain compliance with the following sections of the Election Code:

- 1101-A, 25 P.S. § 3031.1, requiring an electronic voting system to provide for a permanent physical record of all votes cast;

- 1107-A(2), 25 P.S. § 3031.7(2), requiring an electronic voting system to permit voting on both candidates and ballot questions, according to the official ballot;

- 1107-A(3), 25 P.S. § 3031.7(3), requiring an electronic voting system to permit straight party voting, including the "Pennsylvania method" of straight party voting;

- 1107-A(4), 25 P.S. § 3031.7(4), requiring an electronic voting system to permit a voter to vote for candidates of all different parties, and write-in candidates;

- 1107-A(5), 25 P.S. § 3031.7(5), requiring an electronic voting system to permit a voter to enter write-in votes;

- 1107-A(6), 25 P.S. § 3031.7(6), requiring an electronic voting system to permit a voter to cast votes for candidates and ballot questions he or she is entitled to

9

vote for, and prevents a voter from casting votes the voter is not entitled to vote on;

- 1107-A(7), 25 P.S. § 3031.7(7), requiring an electronic voting system to prevent over-votes;

- 1107-A(8), 25 P.S. § 3031.7(8), requiring an electronic voting system to prevent a person from casting more than one vote for a candidate or question, except where this type of cumulative voting is permitted by law;

- 1107-A(9), 25 P.S. § 3031.7(9), requiring an electronic voting system to permit voters to vote in their own parties' primaries, and prevents them from voting in other parties' primaries, while also permitting voters to vote for any nonpartisan nomination or ballot question they are qualified to vote on; and

- 1107-A(10), 25 P.S. § 3031.7(10), requiring an electronic voting system that registers votes electronically to permit voters to change their votes up until taking the final step to register the vote, and for systems that use paper ballots or ballot cards, permits a voter to get a new ballot in the case of a spoiled ballot, and to mark and cancel the spoiled ballot;

- Parts of 1107-A(16), 25 P.S. § 3031.7(16), requiring an electronic voting system which provides for district-level tabulation to include (i) a public counter to register how many ballots are submitted to be counted; (iv) will not tabulate an over-vote, with an option to notify a voter of an over-vote if used during voting hours; and (v) generates a printed record that counters are set to zero before voting commences; and

- Parts of 1107-A(17), 25 P.S. § 3031.7(17), requiring an electronic voting system which provides for central-count tabulation to (ii) preclude tabulation of an over-vote; and (iii) indicate that counters are set to zero before processing ballots, either by district or with the capability to generate cumulative reports.

The Functional Examiner also used the System Level Testing to further evaluate the design and accuracy aspects of the system as required by Sections 1107-A(11) and (13), 25 P.S. §§ 3031.7(11) & (13), through his use at public demonstration, in addition to the requirements being validated in the documentation review phase by reviewing EAC certification reports.

The Security/Penetration Analysis examined the voting system's compliance with the requirements of the Pennsylvania Election Code by analyzing physical security procedures and impoundment of ballots. Precinct tabulation devices were installed for delivery to the precinct, and the Functional Examiner analyzed the pertinent security procedures performed

on each device to ascertain compliance with Section 1107-A(12), 25 P.S. § 3031.7(12), requiring an electronic voting system to provide acceptable ballot security procedures and impoundment of ballots to prevent tampering with or substitution of any ballots or ballot cards. The Functional Examiner also used the security analysis phase of testing to validate compliance with parts of Sections 1107-A(16) and (17), 25 P.S. §§ 3031.7(16) & (17), that relates to system security.

The Privacy Analysis examined the voting system's compliance with Section 1107-A(1) of the Election Code, 25 P.S. § 3031.7(1), requiring that an electronic voting system provide for absolute secrecy of the vote, by analyzing how the polling place devices met the pertinent privacy requirements.

The Usability Analysis evaluated the compliance of the voting system with Sections 1107-A(14) and (15), 25 P.S. § 3031.7(14) & (15). The results from the tests were used by the Functional Examiner to supplement his conclusions from the documentation review phase.

Accessibility Examination

The accessibility examination was designed to provide insights about each voting system's usability and accessibility especially for voters with disabilities, as well as how effectively the system could be deployed by poll workers and voters. The Accessibility Examination included a team of three examiners with accessibility, usability and election process experience, collectively referred as Accessibility Examiner. The examination process was divided into three parts:

- **Expert review** by the Accessibility Examiner, using scenarios based on personas of people with disabilities from National Institute of Standards and Technology (NIST) and their professional experience.

- **Voters with disabilities used** the system voting a reasonable length PA ballot and completed a questionnaire about their experience. The Accessibility Examiner observed and made notes.

11

- **Election officials and poll workers tested the accessibility features** to evaluate how they would be activated during an election. They commented on the system based on their experience.

The testing team determined the test ballot parameters and constructed a typical PA ballot, with a mix of contest types and variation in the number of candidates to be voted for each contest. The ballot contained 14 contests: 1 straight party contest, 1 vote for a pair (President/Vice President), 7 vote for one, 2 vote for not more than three, 1 vote for not more than five, 1 referendum contest and 1 retention contest. The facilitator instructed voters on the vote selections to be made, so that results could be compared between each session and different examinations.

Security Testing

The Security testing provided a means to assess the required security properties of the voting system under examination and ascertain compliance with PA Election Code requirements, including 25 P.S. §§ 3031.7(11), (12), (16) and (17). The security tests were based on the PA Voting System Security Standard, published as Attachment E to the Directive for Electronic Voting Systems. The Security Examiner conducted tests that covered the following areas of testing - documentation review, design, software security, network capabilities, audit logging, physical security and penetration testing.

Democracy Suite 5.5A Examination Approach

Democracy Suite 5.5A is a release to correct the anomalies noted in Democracy Suite 5.5 system. The examiners evaluated the changes submitted by Dominion and developed test protocols to validate the modifications to Democracy Suite 5.5 to ensure that the fixes

12

resolved the identified anomalies and that the modified system maintained compliance with all the PA Election Code requirements.

Functional Examination

The Functional Examiner and Department agreed that the test approach must include Documentation Review, Source Code Review, System Level Testing and Usability Analysis. Security/Penetration and Privacy analysis results were leveraged from Democracy Suite 5.5 examination since those aspects of the system remained unaffected by the isolated code changes made to the system.

Documentation review was performed to verify that the portions of the Pennsylvania Election Code, which reference documentation detail, are sufficiently met by the Dominion Democracy Suite 5.5A documentation. Source code review was done to determine if there were any vulnerabilities that warranted additional testing and the review focused on source code modifications for the Democracy Suite 5.5A release. System Level Testing examined Democracy Suite 5.5A by conducting a general election and closed primary election. The election runs were to (a) test and confirm that the anomalies identified during Democracy Suite 5.5 examination were remediated, and (b) to perform regression testing of all components of the system. The election runs allowed the Functional Examiner to ascertain that the compliance with the Election Code requirements determined during the System Level Testing of Democracy Suite 5.5 is maintained in the new release. Usability analysis was performed to verify that the usability concerns identified during the examination of Dominion Democracy Suite 5.5 is remediated in the new release.

Security Testing

The Department of State in consultation with the Security Examiner decided that the test approach must include only validating the documentation updates to ensure secure

implementation of the system components, since the isolated code changes did not affect the security aspects of the system.

Accessibility Examination

The Department of State, in consultation with the Accessibility Examiner, decided that the findings from Democracy Suite 5.5 Accessibility Examination can be used for Democracy Suite 5.5A, since there were no hardware changes and the isolated code changes were for correcting the anomalies identified during Democracy Suite 5.5. The Department discussed the software changes done for the ICX with the Accessibility Examiner, since Accessibility testing also reported the same usability concerns identified during Functional Examination.

B.   Examination Process and Procedures

The examination process and procedures followed for the Democracy Suite 5.5 and Democracy Suite 5.5A examinations are listed in the sections below. The final determination in this report is based on the combined analysis of the results and conclusions from both examinations.

Democracy Suite 5.5 Examination

Functional Examination

The public demonstration and functional examination portion commenced on October 15, 2018, at Room G24A/B of the Commonwealth Capitol Complex - Finance Building, 613 North Street, Harrisburg, PA 17120. The test execution tasks took approximately four days. Members of the public were allowed as observers for the examination. The Functional Examiner performed System Level Testing, Security/Penetration Testing and Privacy and Usability Analysis during the examination. Source code and Documentation review were completed prior to the public examination at SLI lab facilities in Wheat Ridge, Colorado.

Dominion supplied all the hardware equipment required for the examination. All

14

software and firmware necessary to perform the examination was received directly from the Voting System Test Laboratories (VSTL) that tested the voting system for EAC certification. The trusted build of the software and firmware for each device being evaluated were installed using the appropriate media for installation. The hash codes for all system components were captured using the process listed in the manufacturer's Technical Data Package (TDP) by the Functional Examiner with assistance from Dominion representative. The Functional Examiner further compared and confirmed that all the captured hash codes matched the hash codes for the EAC certified system executables before executing the test scripts.

The Functional Examiner created the election definition using EMS – EED and transport media was created to populate the devices under examination with the election. The polling place was set up using ICP and ICX - BMD (Classic and Prime). A primary and general election were then run using polling place devices and central scanners. Ballots were tabulated at the polling place using ICP and ICC using scanners Canon imageFormula DR-G1130 and Canon imageFormula DR-M160II. Results were then tabulated using EMS and validated against expected results.

Accessibility Examination

The accessibility examination portion commenced on October 15, 2018, at Room G24A/B of the Commonwealth Capitol Complex - Finance Building. The examination lasted approximately three days followed by a debrief meeting on October 18, 2018, with DOS and CCD to discuss initial findings. The examination included expert review by the Accessibility Examiner, sessions with four poll worker groups, and sessions with six voters with disabilities using different accessible devices for voting. The voter sessions each took approximately an hour. The poll worker sessions took approximately one hour to 90 minutes each. Dominion supplied the hardware and supplies for the Accessibility Examination. The equipment was prepared for the examination by loading the required election definition using transport media. This test examined the Dominion Voting ImageCast X (ICX) touch screen ballot marking device with COTS printer HP LaserJet Pro Printer M402dne and the

15

ImageCast Precinct Optical Scanner (ICP).

The typical accessible voting experience involves the voter making selections on the ICX to mark their ballot, printing their ballot using a separate printer, and then scanning their printed ballot on the ICP to cast the ballot. The Accessibility Examiner identified the accessibility features of each component as listed below:

ICX accessibility features:

- ADA compliant voting booth
- Touch screen, in portrait orientation
- Audio ballot with two voices: a prerendered, tactile keypad instructions voice and a ballot content, text-to-speech voice
- Tactile key pad with different-shaped, braille encoded buttons
- Binary input/Dual switch jack (on tactile key pad)
- Audio output jack
- Dual switch "jelly bean" buttons
- Sip-and-puff device, mountable to the table with adjustable arm
- Voter settings:

  - Language choice
  - Audio volume and tempo changes
  - Text Size (default, "Big")
  - Screen contrast options: color, white background with black text, and black background with white text
  - Screen blank, while using the audio only

ICP scanner features

The ICP scanner had no notable accessibility features.

The machine features listed above are not exhaustive. For more information about the Dominion Democracy Suite 5.5 system, refer to the vendor provided technical specifications.

The Accessibility Examiner prepared voting scenarios for each voting session to

16

allow comparison of results between each session. Both the ballot contents and the instructions for marking the ballot were designed to exercise different types of interactions (navigation in ballot, navigation in contest, undervotes, overvotes, straight party, navigation within the review/summary screen, making changes to a contest from the review/summary screen). The ballot included both very short contests, and those long enough to potentially fill more than one screen, even at the default text size.

The Accessibility Examination does not produce a typical voting session, but it provides a structured opportunity to explore how the voting system works in all interaction modes including:

- Visual display mode with default settings and use of enhanced options for text size, brightness, and contrast
- Audio format with options for volume and tempo
- Touch input and navigation on the display screen
- Input and navigation using a tactile keypad
- Input and navigation using a dual switch

Expert Review by Accessibility Examiner

The Accessibility Examiner used the same ballot and instructions to be used for voter and poll worker review, for their expert review, so they would be familiar with the interaction voters would experience.

Sessions with voters

Each voter session took about an hour. They included:

- An opening interview about their previous voting experience and the types of assistive technologies they use in daily life and in voting.
- A very basic orientation to the system with opportunities for voters to ask questions about any assistive technologies available.

17

- Set-up of the machine using the provided assistive access features based on the needs of the individual voter. Where a blind voter would typically use the provided or personal headset to listen to the audio instructions, the tests used an external speaker so that the testers could inquire about the voters understanding of the instructions.

- Voting a ballot following facilitator-guided voting instructions, and facilitator help only where necessary. Voters were encouraged to give feedback about their experiences, both positive and negative, as they went through the ballot. The Accessibility Examiner and the voters discussed any feedback and questions that occurred during the voting sessions and re-evaluated any findings as necessary.

- A closing interview including a questionnaire about their voting experience and reactions to the system.

Sessions with poll worker groups

Each poll worker session took approximately an hour and a half, depending on the group size and provided the most activity variability. Each session included:

- A brief orientation to the voting systems and the accessibility features, similar to a poll worker training.

- An opportunity for the poll workers to review vendor-provided instructions before trying the system. They marked ballots and experimented with the accessibility features.

- An opportunity for the poll workers to interact with two to three different access-needs scenarios, depending on the size of the group and available time. Each scenario involved an examiner role-playing as a voter with an unspecified disability. In some scenarios, the voter didn't immediately identify their disability. Since this was not intended to test the poll-worker's ability to determine appropriate accommodations, each simulated voter provided information about the accommodations they needed in

18

general language. This sometimes required the poll worker to ask the voter what additional assistance she or he might need. Then the poll worker activated the necessary accessibility features for the voter. Note: due to lack of time, the final poll worker group did not participate in the examiner role-plays.

The Accessibility Examiner took notes about aspects of the system that worked well and problems they encountered during all three phases of the examination. The issues were then categorized based on their impact on a voter's ability to vote independently and privately.

- Positives – things that voters mentioned as meeting or exceeding their expectations
- Annoyances – things voters mentioned as problems, but which did not significantly slow their progress in marking their ballot
- Problem solving – instances where voters hesitated and had to figure out how to complete an action or task, but were able to do so on their own, by exploring the system or relying on past experience with technology
- Needs assistance - problems that could only be solved with help, such as instructions or assistance from a poll worker
- Likely to prevent independent voting for voters with some disabilities- problems that will prevent successful independent and private voting for voters with some disabilities, even with good knowledge about how to use the system and accessibility features

The Accessibility Examiner then compiled the findings including categorizations from the examination into a report submitted to the Secretary.

Security Testing

The Security Testing was done at SLI lab facilities in Wheat Ridge, Colorado. The

Security Examiner received the hardware devices from Dominion and the software and firmware were obtained from the Voting System Test Lab (VSTL) which tested the system for EAC certification testing. The Examiner installed the Trusted Build prior to the evaluation using the appropriate media for installation. The Security Testing is comprised of a series of test suites which are utilized for verifying that a voting system will correspond to applicable security requirements within the Pennsylvania Election Code and PA Security Standards. The Security Examiner evaluated each component of the Democracy Suite 5.5 system and the system as a whole for interactions between components. These test suites covered areas of documentation review, design, software security, network capabilities, audit logging, physical security of the voting systems.

The requirements associated to each area of testing were applied to the Democracy Suite 5.5 system in the following manner. The Security Examiner did a review of the EAC testing reports of the system and executed tests for a cross section of Voluntary Voting System Guidelines (VVSG)1.0 requirements to reconfirm compliance. The Security Examiner then designed tests that included in depth verification and validation of reports, audit logs and physical and logical access controls for each of the components of the voting system. The physical security examination included security seals, lock/key combinations, measures for collection of voting in the event of an extended power outage, ballot box and system access points. Tests were done to ensure that election results, media used, reports and audit logs were protected from attempts to decrypt, manipulate and corrupt election data. The Security Examiner also created a vulnerability assessment and performed penetration testing of the Democracy Suite 5.5 system.

Dominion Democracy Suite 5.5A examination

Functional Examination

The follow-up examination was conducted on December 5 and 6, 2018, at SLI Global Solutions facility, 4720 Independence Street, Wheat Ridge, Colorado, and was observed by Department staff remotely in a conference room in BCEL, 210 North Office Building, 401 North Street, Harrisburg, Pennsylvania via web conference. Dominion supplied all the

20

hardware equipment required for the examination. All software and firmware necessary to perform the examination was received directly from the VSTL that tested the voting system for EAC certification. The Functional Examiner installed and/or verified the Trusted Build for each system component. A primary and general election were then run using EMS, ICX-Classic and Prime, ICP and ICC. Results were then tabulated and validated against expected results. The Functional Examiner performed the Source Code and Documentation Review before the witnessed examination.

C.   Examination Results

Democracy Suite 5.5 Functional Examination

On November 17, 2018, the Functional Examiner issued his draft report for the testing of Democracy Suite 5.5 with a recommendation that the system was not in compliance with Section 1107-A(10) and (15), 25 P.S. §§ 3031.7(10) & (15), of the Pennsylvania Election Code. The report noted the following concerns:

1) The ICX BMD did not allow the user to cast a "no vote" in a contest after voting straight party without exiting the straight party option. The system behavior was not intuitive enough for the user to understand and did not adequately communicate to the voter what they needed to do to accomplish their vote intent.

2) The ICX BMD indicated to the voter that they were casting their ballot even though the ballot was only being printed for scanning and tabulation on ICP or ICC.

The Functional Examiner's report indicated successful completion of tests executed to ascertain compliance to all other requirements mandated by the Pennsylvania Election Code. The Examiner report for Democracy Suite 5.5 (Test Report – PDV-003-FTR-01) included details of the test cases, execution and successful completion.   The following section is a summary of the results of the examination as set forth in fuller detail in the Examiner's Report.

21

1.   Source Code Review

Source Code Review for Democracy Suite 5.5 was performed, with a focus on determining whether any vulnerabilities could be found. The Functional Examiner reported that the code review was completed with no malicious software, cryptographic software, process control or password management vulnerabilities being found. The Examiner concluded that no deficiencies were found during source code review.

2.   Documentation Review

The Documentation Review testing performed by the Functional Examiner demonstrated that the Democracy Suite 5.5 meets the relevant requirements of the Pennsylvania Election Code. The Examiner reviewed the "Test Report for EAC 2005 VVSG Certification Testing of Dominion Democracy Suite 5.5 Voting System"

The review of the EAC test reports by the Functional Examiner and the EAC certifications submitted by Dominion satisfy the requirements of Section 1105-A(a) of the Election Code, 25 P.S.§ 3031.5(a): requiring that an electronic voting system has been examined and approved by a federally recognized independent testing authority (ITA), or VSTL as such authorities are now called, as meeting the applicable performance and test standards established by the federal government.

Functional Examiner concluded that the design requirements of Sections 1107-A(11) and (14) of the Pennsylvania Election Code, 25 P.S. § 3031.7(11) & (14), are met by the combination of EAC hardware Non-Operating Environmental Tests, which included bench handling, vibration, low temperature, high temperature, humidity and product safety tests. The system accuracy testing during EAC certification testing provided confirmation of system accuracy as required by Section 1107-A(11) of the Pennsylvania Election Code, 25 P.S. § 3031.7(11).

The Functional Examiner reviewed the system summative usability test report submitted to EAC to ascertain compliance to the usability requirement of Section 1107-A(15) of the Pennsylvania Election Code, 25 P.S. § 3031.7(15). The review determined that

22

the system documentation provided met EAC criteria for usability[2].

Accuracy testing performed during EAC certification testing provided confirmation of system accuracy to ascertain compliance to Section 1107-A(13) of the Pennsylvania Election Code, 25 P.S. § 3031.7(13). Additional testing to ensure system accuracy in tabulating PA specific voting scenarios was done during the Primary and General Election runs.

3.   System Level Testing

As set forth in the examination approach, System Level Testing was divided into two separate tests, a closed primary election and a general election. The ballots defined had contests with voting variations supported in Pennsylvania.

A closed primary election consisting of two political parties (Republican, Democratic), three precincts Precinct 1, Precinct 2 - split into Precinct 2a and 2b, Precinct 3, was run utilizing EMS, ICX (Classic and Prime), ICP and ICC (two scanners). For the Republican ballot, there were 21 contests: 19 partisan contests and 2 referendums, 10 "Vote for One", 1 "Vote for no more than Two", 3 "Vote for no more than Three", 4 "Vote for no more than Four" and 1 "Vote for no more than Fifteen". For the Democratic ballot, there were 21 contests: 19 partisan contests and 2 referendums, 11 "Vote for One", 1 "Vote for no more than Two", 1 "Vote for no more than Three", 5 "Vote for no more than Four" and 1 "Vote for no more than Fifteen". Referendum contests were added to test the generation of non-partisan ballots. The Functional Examiner validated compliance of the system to Sections 1101-A and 1107-A(2), (5)-(11) and (13), 25 P.S. §§ 3031.1, 3031.7(2), (5)-(11) & (13). All test cases passed without anomalies.

A general election consisting of four political parties (Republican, Democratic, Green and Libertarian), three precincts (Precinct 1, a split precinct 2, consisting of splits 2a and 2b, Precinct 3)), and 21 contests (19 partisan contests and 2 retentions, 11 "Vote for

---

[2] The Functional Examiner, however, further identified during Usability Analysis that the system did not comply with Section 1107-A(15) of the Pennsylvania Election Code, 25 P.S. § 3031.7(15).

One", 1 "Vote for no more than Two", 5 "Vote for no more than Three", 1 "Vote for no more than Four" and 1 "Vote for no more than Fifteen") was run utilizing EMS, ICX (Classic and Prime), ICP and ICC (two scanners). The Functional Examiner examined the compliance of the system to Sections 1101-A and 1107-A(2)-(8), (10)-(11) and (13), 25 P.S. §§ 3031.1, 3031.7(2)-(8), (10)-(11) & (13). All test cases except those validating 25 P.S. § 3031.7(10) passed without anomalies.

Functional Examiner included test cases to validate Sections 1107-A(16) and (17), 25 P.S. § 3031.7(16) & (17), that mandate voting systems to generate zero proof reports and correctly handle over-votes during the election runs. The remainder of the requirements of 25 P.S. § 3031.7(16) and (17) were validated by the Functional Examiner during the Security/Penetration Analysis.

Election definitions for both primary and general elections were created within EMS-EED, and transport media was created to populate ICP, ICX and ICC. Polls were opened and ballots were marked manually, as well as electronically via the ballot marking devices ICX (Prime and Classic). Ballots were tabulated utilizing the ICP and ICC (Canon DR-G1130 and Canon DR-M160-II) scanners.

The Functional Examiner used English and Spanish ballots for the test. Reports were generated after closing polls and results were validated against expected results. Each specific hardware and software component was tested for compliance with the required sections of the Election Code.

The Democracy Suite 5.5 is a paper based system and paper ballots provide a permanent physical record of each vote cast adhering to Section 1101-A(1) of the Election Code, 25 P.S. § 3031.1. Hand-marked paper ballots and ballots marked electronically using ICX are tabulated when voters insert the ballots into the ICP polling place scanner or when the ballots are tabulated at the central location using ICC.

The primary and general election definitions were created using EMS-EED and loaded to polling place devices and central scanners, which provided assurance that the

24

system can perform ballot creation activities. The Functional Examiner successfully added contests including straight party, parties, choices, precincts, districts, ballot styles, referendum questions and retention contests with appropriate candidates and choices. Media was created to load the election to ICP, ICX (Classic and Prime) and ICC. The ICP and ICX (Classic and Prime) components of the Democracy Suite 5.5 successfully permitted votes for "1 of 1," "N of M," and "Question" contests for a standard and ADA voting session. The test cases also included straight party voting to confirm that all appropriate candidates were selected. The Functional Examiner thus concluded that the system is in compliance with Section 1107-A(2), 25 P.S. § 3031.7(2).

Each of the applicable components of Democracy Suite 5.5 allowed the test voter to cast votes for candidates on the ballot and also a write-in vote, demonstrating compliance with Section 1107-A(5), 25 P.S. § 3031.7(5).

Democracy Suite 5.5 meets the requirements for Section 1107-A(6), 25 P.S. § 3031.7(6), because the test voters cast votes on different ballot styles for candidates and questions and the ICX (Classic and Prime) displayed only contests for which the voter was entitled to vote.

The system's compliance to Section 1107-A(7), 25 P.S. § 3031.7(7), was demonstrated since ICP has the capability to indicate overvotes for any office and the voter has the ability to either spoil the ballot or cast the ballot with overvotes if the voter decides to do so. Ballot marking device ICX (Classic and Prime) did not allow overvotes. The Functional Examiner also noted that the system allowed undervotes, but warned the user about the undervote if configured to do so.

The successful validation of the election results showed that ICC as well as precinct tabulator ICP include the capability to reject all choices recorded on the ballot for an office or question if the number of choices exceeds the number for which the voter is entitled to vote, adhering to Section 1107-A(8), 25 P.S. § 3031.7(8).

The Democracy Suite 5.5 complies with Section 1107-A(9), 25 P.S. § 3031.7(9),

because test voters in the closed primary election were only able to vote for referendum questions and candidates seeking the nomination of their party.

The Functional Examiner validated adherence to Section 1107-A(10), 25 P.S. § 3031.7(10), for both ADA and standard voting sessions. Ballot marking device ICX (Classic and Prime) allowed the voters to review their ballots before printing for tabulation on ICP or ICC. The Functional Examiner attempted to change votes on ICX (Classic and Prime) for candidates within the contest, as well as after leaving the contest and then returning to other contests and while reviewing the summary screen. The tests demonstrated that ICX allowed changing the selections until the voter decides to print the ballot. The Functional Examiner noted that the system did not intuitively allow the voter to deselect all candidates in a contest after voting straight party. The BMD, ICX (Prime and Classic), also showed a message to the voter that they were casting the ballot even though the ballots were being printed to be scanned and tabulated on the ICP or ICC. The ICP, precinct scanner of Democracy Suite 5.5 provides the voter with a caution message when the ballot contains errors, such as overvotes or undervotes. The voter is also presented an error report on the screen when the tabulator detects potential errors. The voter can either decide to affirm their intent by casting the ballot, or spoil the ballot and fill out another ballot.

Accuracy requirements of 1107-A(11), 25 P.S. § 3031.7(11), previously ascertained by reviewing EAC test reports were further validated by the successful tabulation and validation of the primary and general elections run by the Functional Examiner.

The Functional Examiner validated via test cases during the primary and general election that the tabulating devices ICP and ICC generated zero proof reports only before ballots were cast, the system rejected all votes for the contest in an overvote situation, and produced a results report when appropriately configured, as required under Sections 1107-A(16) and (17), 25 P.S. § 3031.7(16) & (17). The Functional Examiner confirmed that the zero-proof report cannot be generated on demand after a ballot is cast.

Ballots were marked by hand including write-in votes during the general election to

examine the system's ability to properly enact the PA method of straight party voting. The ICP, ICC and ICX (Classic and Prime) demonstrated compliance to Sections 1107-A(3) and (4), 25 P.S. § 3031.7(3) & (4). The ballot marking devices allowed marking ballots following the PA method and the scanners/tabulators appropriately tabulated ballots with PA method test scenarios.

The voting variations used for the examination included write-in votes, to ensure that all components of the system will identify the appropriate write-ins and allow the election official to tabulate all votes including write-in votes.

4.   Security/Penetration Analysis

The Functional Examiner adopted a strategy to review each pertinent requirement for this test individually and then created test cases to address it in either a documentation review, a functional test, or both.

Precinct tabulation devices and ballot marking devices were configured for delivery to a polling place from warehouse including all seals and locks recommended by the manufacturer. The central scanners were configured for operation in a county office. The devices were inspected for the ability to be tampered with. The Functional Examiner examined the polling place equipment to confirm the following:

- Adequate seals and locks are present to prevent tampering, and the system provides noticeable evidence if any tamper attempt (successful or failed) occurs (ICP, ICX - Classic and Prime);

- There is no access to the ballots/ballot cards, either via printer, the ICP or ballot card stock, to tamper or substitute any ballots (processed, unprocessed, challenged or provisional) (ICP, ICX – Classis and Prime);

- Devices are not accessible to unauthorized personnel to programmatically tamper with the device that would affect ballot presentation, print, or any other feature/activity (ICX – Classic and Prime);

- Devices not accessible to unauthorized personnel to programmatically tamper with the device that would affect ballot processing, delivery to ballot box, or any other feature/activity (ICX – Classic and Prime and ICP); and

- The Ballot box is tamper proof and/or tamper evident.

The Functional Examiner physically examined the central count equipment ICC for ballot security procedures, and verification of the system adequately preventing the tampering and substitution of ballots.

The Functional Examiner also examined the components of the Democracy Suite 5.5 system for password management of administrative functions and ensured that the system counter could not be reset by unauthorized persons. In addition, the Functional Examiner also reviewed Dominion System Documentation for ballot security procedures at the polling place and central location to ensure that the manufacturer recommended the required steps for configuring the Democracy Suite 5.5 securely for Election. Based on the tests the Functional Examiner concluded that that the system complies to 1107-A(12), 25 P.S. § 3031.7(12).

The Functional Examiner included test cases during the Security/Penetration analysis phase of the testing to evaluate the security requirements mandated by Setion1107-A(16) and (17), 25 P.S. § 3031.7(16) & (17). The Functional Examiner validated that the polling place tabulation device, the ICP, had a visible public counter and the system prevented authorized and unauthorized users access to vote data while polls are open. Tests were completed to verify that USB ports do not allow any data or information to be transferred to the ICP and no maintenance, poll worker or administrator accessible screens allow tampering with the tabulating element. The system did not allow polls to be opened without running a zero-proof report and the content of zero-proof report showed that all candidate positions, each question and the public counter were all set to zero. The functionality of the system to generate the close of polls report was verified and the report contents were analyzed to ensure that it contained the total number of ballots tabulated and total number of votes for each candidate and question on the ballot. Based on the above tests and the test cases executed while running the elections, the Functional Examiner concluded that

28

Democracy Suite 5.5 complies with all requirements mandated by 25 P.S. §§ 3031.7(16) and
(17).

5.   Privacy Analysis

The Functional Examiner reviewed and inspected the privacy aspects of the
Democracy Suite 5.5 system to determine compliance with Section 1107-A(1) of the
Election Code, 25 P.S. § 3031.7(1). The Functional Examiner determined that the
components of the system used at the polling place comply with 25 P.S. § 3031.7(1) by
review of system documentation and physical inspection. Central scanners were physically
examined by the Examiner for adequate visual secrecy. The Functional Examiner also
verified that no voter data, including stored ballot images are tied back to any specific voter,
in a manner that would compromise voter secrecy.

6.   Usability Analysis

The Functional Examiner determined that Democracy Suite 5.5 demonstrated
compliance with the usability requirements of Section 1107-A(14) of the Election Code, 25
P.S. § 3031.7(14) , by reviewing appropriate EAC certification reports and vendor
documentation. The Examiner determined that the ICX (Classic and Prime) BMD did not
comply with the requirements of Section 1107-A(15) of the Election Code, 25 P.S. §
3031.7(15), since the system did not allow the user to cast a "no vote" in a contest after
voting straight party without exiting the straight party option. The system behavior was not
intuitive enough for the user to understand and did not adequately communicate to the voter
what they needed to do to accomplish their vote intent. Additionally, the ICX-BMD
informed the voter that they are "casting" their vote even though the ballot was only being
printed for scanning and tabulation on ICP or ICC.

Democracy Suite 5.5 Accessibility Examination

The tests included examiner review, and sessions with voters and poll workers. A
summary of the test details and findings is discussed in this section.

29

Examiner Review

The Accessibility Examiner conducted a review of the voting system under examination prior to sessions with voters and poll workers. The Accessibility Examination team included both accessibility and usability expertise to ensure background and knowledge of the issues for accessible voting. The Accessibility Examiner had experience working with people with a wide variety of disabilities and their impact on daily life, knowledge of the range and use of assistive technologies that voters with disabilities might rely on for access, experience conducting usability evaluations with voters and strong knowledge of best practices and design principles for digital technology and voting systems. The expert review gave the examiners a chance to make sure they understand how the system and accessibility features works and to note anything they want to watch for during other testing.

Voter Sessions

The following voter population was represented in the test sessions:

- 4 blind from birth
- 1 late onset blindness
- 1 dexterity/limited use of hands

Age Ranges: 35 thru 70. All but one (a 70-year old) were in the 35-60-year-old age range.

Counties: Allegheny, Dauphin, Lebanon, Philadelphia, or York

Voters had a range of voting experiences. The Accessibility Examiner noted that the test population included a limited range of disabilities and the top problems with the ICX and ICP machines largely focused on issues a low or no vision voter would experience.

30

Poll worker Sessions

Poll workers were invited to come in teams. We had a total of fourteen participants across five sessions, which represented poll workers in Perry and Dauphin counties. The poll worker groups:

- Had between five and twenty-six years of experience.
- Had at least one election judge
- Were experienced with the Danaher ELECTronic 1242 and the ES&S iVotronic systems
- Had mostly limited experience serving voters with disabilities.

    Unique facts about the poll worker groups:

- Three poll workers had blind family members
- One poll worker was blind
- One poll worker was a retired user interface designer

The Accessibility Examiner noted that poll workers with a wider range of voting system experience and different sized communities would have provided a better sample size for the test.

The Accessibility Examiner compiled the findings from the examiner review, voter sessions and poll worker sessions into positives, annoyances, problem solving, needs assistance and likely to prevent independent voting for voters with some disabilities. The Accessibility Examiner included recommendations for improving the accessible voting experience with each of the top five accessibility issues identified. The report also included recommendations on how election officials can support voters and poll workers when the new system is fielded. This section presents a summary of the report. Attachment B of this document lists these issues and recommendations in fuller detail and also describes all the observations from the Accessibility Examination.

The Accessibility Examiner noted in the summary section of the report that the

31

Dominion systems are an advance in independence and privacy for Pennsylvania voters with disabilities, and identified several positive aspects of the system including the following:

- Voters could vote privately and independently.

- Access features were easily learned by voters and poll workers, and poll workers reported the features would help their voters.

- Sufficient default text size for all sighted voters and the ability to increase to a larger font, if desired.

- Visual interface is clean and generally intuitive.

- Printed ballots could easily be read by app-based screen readers

The top five accessibility issues identified by Accessibility Examiner and voters are summarized in the following section. The Department further evaluated each of the findings and recommendations from the Accessibility Examiner and included the fielding recommendations as conditions for certification of the system3. The Department also discussed the findings from the Accessibility testing, specifically the ones that were marked as "Likely to prevent independent voting for voters with some disabilities" to ensure that appropriate fielding recommendations would alleviate the concerns for most voters.

Top 5 Accessibility Issues:

Privacy and independence restrictions -

- Poll workers must create a special voter card and initialize the assistive devices for voters. This means voters have to disclose disabilities to poll workers or poll workers have to guess voter's abilities.

- The large ICX touchscreen and placement inside the voting booth may make it possible for other voters and people in the polling location to see how the

---

[3]Examples of conditions for certification can be found in this report at identification numbers B, R, T, U, V, FF and GG which relate to the top five accessibility issues found during the examination findings.

.

voter is voting, unless the county mitigates this risk when configuring the polling place.

<u>Assistive technologies quality, instructions, and feedback –</u>

- For the ICX audio, one voice provides voting instructions and the other announces ballot content. These appeared to use different technologies. Initially, there was a dramatic volume difference between the two, but the vendor was able to correct this problem. The rate of speech is different for the two voices, and the content voice is difficult to understand at very slow or high speeds because of how the audio playback managed the speed.

- The tactile keypad has duplicated buttons and a help button that is not helpful.

- The voting instructions are persistent and repetitive, with poor phrasing that makes it difficult for voters to understand. Lastly, the content of the instructions is too wordy, confusing, and ultimately unhelpful. Voters found it easier to ignore the instructions.

<u>Write-in process</u>

- The write-in process was difficult for the blind voters, and each required some facilitator aid to successfully finish.

- For voters using the audio assistance, there are no instructions to help a voter edit and verify their write-in.

<u>Silent/Hidden selection and deselection</u>

- The implementation of the straight party option made candidate selection and deselection confusing for some voters.

- When candidates overrode their straight party vote in a longer contest, candidates could be deselected off screen and out of the voter's view, without any system alert.

- Overvote protections on the system greys out the remaining options once the maximum number of selections are reached. This may cause the voter using the audio ballot to not hear all of the options in a contest.

Paper ballot handling

- The scanner bed is very shallow and cannot support the entire ballot, and if the ballot is not inserted properly, the scanner will return it to the voter. Since the scanner bed is not full size, the ballot may fall on the floor.

- There are no audible cues to assist blind voters, and the scanner screen is not easy to see.

- Contest alerts used on the paper ballots are not used or worded differently on the touchscreen device.

- The Accessibility Examiner noted that paper ballot is printed on cardstock and can be read by personal assistive devices. It was noted that the system uses a COTS printer for printing the ballots and the voters need not handle blank ballots before making the choices. The implementation reduces the verifiability for voters using assistive devices, since the ballot cannot be reinserted to be "read back". Three out of the five blind voters were able to use app-based print readers to read the ballot back to them.

- There are no audible cues on the ICP to assist blind voters, and the scanner screen is not easy to see.

The Accessibility Examiner noted that both test voters and poll workers stressed the need for a strong education program to introduce the new systems, including opportunities for hands on training or practice as a new system is rolled out. The examination team also stressed the need for well thought out deployment of any new voting machines (recommendations listed in Attachment B) and effective poll worker training.

Democracy Suite 5.5 Security Examination

As mentioned in the Examination Approach section of this document, the Security Examiner defined the Security Testing to be comprised of a series of test suites which are utilized for verifying that a voting system will correspond to applicable security requirements within the Pennsylvania Election Code. The examiner analyzed the test results

and summarized any identified deficiencies into 4 major categories: documentation, source code, hardware, and functional. The Security Examiner then evaluated the physical and logical security, software hardening and control measures in place and identified items that required remediation before the system is certified for use in Pennsylvania.

The security testing identified the need to modify the hardening procedures for EMS and the ICX BMD printer for a more secure installation. The examiner also provided recommendations on secure implementation and deployment.

Democracy Suite 5.5A Examination Results

Democracy Suite 5.5A Functional Examination

As identified in the test approach section of this document the follow-up examination of Democracy Suite 5.5A included Documentation Review, Source Code Review and System Level Testing and Usability Analysis.

1.   Documentation Review

The Examiner reviewed the draft "Test Report for EAC 2005 VVSG Certification Testing Dominion Voting Solutions Democracy Suite 5.5A voting system". The review confirmed that the Dominion Democracy Suite 5.5A has been evaluated to federal standards by a VSTL. Democracy Suite 5.5A was provided the initial certification decision by EAC on December 20, 2018, which serves as an acknowledgement by EAC that the system has successfully completed conformance testing to VVSG 1.0, and hence complies with Section 1105-A(a) of the Election Code, 25 P.S.§ 3031.5(a), which requires that a voting system must be examined and approved by a federally recognized independent testing authority (ITA), or VSTL as such authorities are now called.

2.   Source Code Review

A Source Code Review for the code modifications for Democracy Suite 5.5A was performed, with a focus on determining whether any vulnerabilities could be found that would warrant additional testing. The Functional Examiner concluded that no vulnerabilities

were found during source code review that would warrant additional testing.

3.   System Level Testing

The System Level Testing was divided into two tests, a primary election and general election. The Functional Examiner included test cases to specifically test the PA method anomalies identified during Democracy Suite 5.5 testing as part of the general election.

A closed primary election consisting of two political parties (Republican, Democratic), three precincts (Precinct 1, Precinct 2 - split into Precinct 2a and 2b, Precinct 3 was run utilizing EMS, ICX (Classic and Prime), ICP and ICC (two scanners - Canon DR-G1130 & Canon DR-M160-11). For the Republican ballot, there were 21 contests: 19 partisan contests and 2 referendums, 10 "Vote for One", 1 "Vote for no more than Two", 3 "Vote for no more than Three", 4 "Vote for no more than Four" and 1 "Vote for no more than Fifteen". For the Democratic ballot, there were 21 contests: 19 partisan contests and 2 referendums, 11 "Vote for One", 1 "Vote for no more than Two", 1 "Vote for no more than Three", 5 "Vote for no more than Four" and 1 "Vote for no more than Fifteen". Referendum contests were added to test the generation of non-partisan ballots. The Functional Examiner validated compliance of the system to Sections 1101-A and 1107-A(2), (5)-(11) and (13), 25 P.S. §§ 3031.1, 3031.7(2), (5)-(11) & (13). No issues or anomalies were experienced during these tests, and the objective criteria established in the test protocols were met.

A general election consisting of four political parties (Republican, Democratic, Green and Libertarian), three precincts one of which was a split precinct (Precinct 1, split precinct 2, consisting of splits 2a and 2b, Precinct 3) , and 21 contests (19 partisan contests, and 2 retentions, 11 "Vote for One", 1 "Vote for no more than Two", 5 "Vote for no more than Three", 1 "Vote for no more than Four" and 1 "Vote for no more than Fifteen") was run utilizing EMS, ICP, ICX and ICC. The Functional Examiner examined the compliance

36

of the system to Sections 1101-A and 1107-A(2)-(8), (10)-(11) and (13), 25 P.S. §§ 3031.1, 3031.7(2)-(8), (10)-(11) & (13).

The Functional Examiner created election definitions and executed appropriate test cases on all components of Democracy Suite 5.5A to ensure that the modified system satisfies all requirements of the Election Code. The Functional Examiner used English and Spanish ballots for the test. Reports were generated after closing polls and results were validated against expected results. Each specific hardware and software component was tested for compliance with the required sections of the Election Code.

The Functional Examiner confirmed with appropriate test cases and voting patterns that Democracy Suite 5.5A maintains compliance to Sections 1101-A and 1107-A(2), (4)-(11) and (16)-(17), 25 P.S. §§ 3031.1, 3031.7(2), (4)-(11), (16) & (17), via tests cases in a similar manner as done during the Democracy Suite 5.5 examination. The Functional Examiner validated that the issues identified during the examination of Democracy Suite 5.5 are resolved and demonstrated compliance to Section 1107-A(10), 25 P.S. § 3031.7(10).

4. Usability Analysis

The Functional Examiner validated that the usability issues on the ICX BMD noted during the Dominion Democracy Suite 5.5A were resolved. The ICX-BMD did not have any references to the word "cast" during the printing process. The ICX-BMD displayed a pop up message requiring user acknowledgement indicating that the voter has to exit out of the straight party option to cast a "no vote" in a contest. The Functional Examiner hence concluded that the system demonstrated compliance to Section 1107-A(15), 25 P.S. § 3031.7(15).

Additional Security/Penetration and Privacy analysis were not conducted during the Democracy Suite 5.5A examination since the test cases validated during these tests were not affected by the isolated modification done to the ICX-BMD to resolve the anomalies noted during the Democracy Suite 5.5 examination.

The Functional Examiner also noted that the paper ballots will allow recounts as required by Sections 1117-A, 25 P.S. § 3031.17. The Functional Examiner identified that the following within Article XI-A of the Pennsylvania Election Code, Sections 1101-A to 1122-A, 25 P.S. §§ 3031.1 – 3031.22, are not applicable to the current examination, as each deal with non-functional testing aspects of acquisition, use and maintenance aspects of a voting system:

- 25 P.S. § 3031.2;
- 25 P.S. § 3031.3;
- 25 P.S. § 3031.4;
- 25 P.S. § 3031.6;
- 25 P.S. § 3031.8;
- 25 P.S. § 3031.9;
- 25 P.S. § 3031.10;
- 25 P.S. § 3031.11;
- 25 P.S. § 3031.12;
- 25 P.S. § 3031.13;
- 25 P.S. § 3031.14;
- 25 P.S. § 3031.15;
- 25 P.S. § 3031.16;
- 25 P.S. § 3031.18;
- 25 P.S. § 3031.19;
- 25 P.S. § 3031.20;
- 25 P.S. § 3031.21; and
- 25 P.S. § 3031.22.

After all the testing activities, the examiners and Department concluded that the Democracy Suite 5.5A demonstrates compliance with all requirements as delineated in Article XI-A of the Pennsylvania Election Code, Sections 1101-A to 1122-A, 25 P.S. §§ 3031.1 – 3031.22. The conclusion was drawn based on the examination of Democracy Suite 5.5A in conjunction with the Democracy Suite 5.5 examination.

Democracy Suite 5.5A Security Examination

The Security Examiner evaluated the documentation changes made to the system hardening procedures and confirmed that if the system is implemented following the hardening procedures, it provides a secure implementation.

D.   Observations

During the examination, and in the review of documentation, the Examiner and/or Department staff noted the following observations:

1.   The system presented for examination had undervote warnings turned on for straight party contest on ICX (Classic and Prime). This may make the voter believe that there is a need to make a selection in that contest.

2.   Observations/Findings from the Accessibility Examination are listed on pages 32 thru 34 and as Attachment B of this document.

3.   Dominion Democracy Suite 5.5A does not support cumulative voting.

4.   The configuration of the system complying with the Pennsylvania Election Code requirements including the PA method of straight party voting will require the use of appropriate selections of configurable parameters.

5.   The ADA compliant ballot marking device ICX (Classic and Prime) presented as part of the Democracy Suite 5.5A system, could be effectively used by all voters. This allows jurisdictions to expand the use of these devices for a larger universe of voters and not restrict their use to voters using assistive devices.

6.   The system allows configuration of button labels, warning/alert messages, voter instructions etc. There are some configuration elements that can be configured via the EMS Graphical User Interface (GUI) while there are some elements like button labels that cannot be configured via Graphical User Interface and will need to be done by editing a configuration (JSON) file on the EMS server.

7.   The use of voter access cards for activation will create a lot of components to

39

manage and track on Election Day. Creating a large number of voter activation cards prior to Election Day would make it difficult to keep track of the card inventory. If jurisdictions choose to create cards on demand that would necessitate the need for an additional system at the polling place.

8.   The ICX (Classic and Prime) BMDs use a COTS printer for printing marked ballots. The printer settings need to be appropriately adjusted for the printed ballots to be read by ICP or ICC.

IV.   Conditions for Certification

Given the results of the examination that occurred in October and December 2018 and the findings of the Examiners as set forth in their reports, the Secretary of the Commonwealth certifies the Democracy Suite 5.5A subject to the following conditions:

A.   This certification for Democracy Suite 5.5A is based on the EAC initial certification decision dated December 20, 2018, and will be appended with the final EAC certification documentation after the final EAC certification is issued.[4] Any jurisdictions purchasing and implementing the system before the final EAC certification must perform a trusted build validation after the final EAC certification to ensure that the certified system components are installed. This validation must happen even if the jurisdiction has done a trusted build validation during the system acceptance.

B.   Pennsylvania counties using the Democracy Suite 5.5A must comply with the Directive Concerning the Use, Implementation and Operations of Electronic Voting Systems by the County Boards of Elections issued by the Secretary of the Commonwealth on June 9, 2011, and any future revisions or directives. In particular, Pennsylvania counties must adhere to item four (4) of the directive when setting up and positioning the ICX in the

---

[4] This certification is being issued due to the unique circumstances of the federal government shutdown after the successful initial certification decision was issued by the EAC and notice was given that no further testing is necessary. Consequently, only ministerial documentation remains, which will be appended once issued.

polling place to assure compliance with the constitutional and statutory requirements that secrecy in voting be preserved *(see* Pa. Const Art. VII § 4; and Section 1107-A(l) of the Election Code, 25 P.S. § 3031.7(1)). The ICX (Classic and Prime) screens have large size and high-resolution display and are very clear and can be viewed at wide angles without distortion. Jurisdictions must make a note of this while setting up polling places and purchase privacy booths.

        C.   No components of the Democracy Suite 5.5A shall be connected to any modem or network interface, including the Internet, at any time, except when a standalone local area wired network configuration in which all connected devices are certified voting system components. Transmission of unofficial results can be accomplished by writing results to media, and moving the media to a different computer that may be connected to a network. Any wireless access points in the district components of Democracy Suite 5.5A, including wireless LAN cards, network adapters, etc. must be uninstalled or disabled prior to delivery or upon delivery of the voting equipment to a county board of elections.

        D.   Because Democracy Suite 5.5A is a paper-based system, counties using the Democracy Suite 5.5A must comply at a minimum with Section 1117-A of the Election Code, 25 P.S. § 3031.17, that requires a "statistical recount of a random sample of ballots after each election using manual, mechanical or electronic devices of a type different than those used for the specific election." This audit must be conducted via a manual count of the voter marked paper ballots exclusively. Counties must include in the sample ballots marked by ADA compliant components. Counties are advised to consult the Directive Concerning the Use, Implementation and Operations of Electronic Voting Systems by the County Boards of Elections issued by the Secretary of the Commonwealth on June 9, 2011 and any future revisions or directives that may apply to audits of electronic voting systems.

        E.   All jurisdictions implementing the Democracy Suite 5.5A need to carry out a full Logic and Accuracy test on each device without fail and maintain evidence of Logic and Accuracy (L&A) testing in accordance with the statutory requirements for pre-election and post-election testing. Jurisdictions must include audio ballots and accessible devices during

41

L&A testing. The Department does not recommend automated L&A testing, and discourages the use of preprinted ballots provided by vendors. All components being used on election day, including any Electronic Poll Books being used, must be part of the L&A testing. Counties must ensure that the L&A test cases include all applicable scenarios of the PA straight party method identified in Attachment C to the Directive for electronic voting systems published by BCEL on September 11,2017.

F.   Democracy Suite 5.5A is a paper-based system and hence, implementation of the system for precinct or central count scanning is scalable. Jurisdictions should calculate the number of voting booths necessary to accommodate the number of registered voters in a precinct to avoid long lines. Jurisdictions must include the ICX as an ADA compliant device in configuring a precinct polling place. Jurisdictions must also take into consideration the ICP scanning speed, ballot box and Transport Media capacities on polling place components when deciding on the number of voting booths.

G.   All jurisdictions implementing the Democracy Suite 5.5A must implement administrative safeguards and proper chain of custody to facilitate the safety and security of electronic systems pursuant to the Guidance on electronic Voting System Preparation and Security, September 2016.

H.   Jurisdictions implementing the Democracy Suite 5.5A with the Central Count Tabulator as the primary system, where votes are counted only at the central counting location using central scanners, must comply with Section 301(a) of Help America Vote Act of 2002. The mandate requires counties using central count paper-based systems to develop voting system specific voter education programs that inform voters of the effect of over voting, and instruct voters on how to correct a ballot before it is cast, including instructions on obtaining a replacement ballot. Additionally, the mandate requires that the central count voting system must be designed to preserve voter confidentiality.

I.   All jurisdictions implementing the Democracy Suite 5.5A must ensure that no default passwords are used on any devices and that all passwords are complex and secured. Counties must implement an audit process to review and ensure that no default passwords are

used upon equipment install/reinstall and routinely change passwords to avoid any password compromise. The passwords and permissions management must at a minimum comply to the password requirements outlined in NIST 800-63. This publication can be accessed at https://pages.nist.gov/800-63-3/sp800-63-3.html.

J.   All jurisdictions implementing Democracy Suite 5.5A must configure the polling place components of the voting system to notify voter on overvotes.

K.   All jurisdictions implementing Democracy Suite 5.5A must work with Dominion to ensure that only the certified system configuration is installed on purchase or anytime a system component is replaced or upgraded. Jurisdictions must as part of their user acceptance test verify the implementation to ensure that the components, software and firmware belong to the certified system. Jurisdictions must also perform a trusted build validation as part of the election preparation activities and post-election canvass activities utilizing the vendor supplied methods of validation and verification of voting system integrity. A sample format that can be used for the attestation is added as Attachment C to this document.

L.   Dominion must work with the jurisdictions implementing Democracy Suite 5.5A to ensure that the system has been hardened for a secure implementation. Jurisdictions must implement processes to ensure that all components of the voting system have been hardened per the instructions in the TDP.

M.   Jurisdictions can make use of the adjudication functionality to adjudicate write-ins and evaluate questionable ballots, contests or selections to determine voter intent. Any decisions made during review of the ballot must be agreed upon by a team of at least two reviewers authorized by the election official. The election official can also consult the paper ballot to assist with determinations made during adjudication. In the event of a recount, the voter verified paper ballots must be used for the count.

N.   Jurisdictions implementing Democracy Suite 5.5A must work with Dominion to ensure that the implemented configuration is capable of operating for a period of at least two hours on backup power as required by the VVSG. If the system components don't

43

include internal battery packs for reliable power, the Uninterruptible Power Supply (UPS) specified in the EAC certified configuration must be purchased and used at the polling places.

O.   Jurisdictions using the services of Dominion or a third-party vendor for election preparation activities must work with Dominion or the vendor to ensure that systems used for ballot definition activities are considered part of the voting system and use certified voting system components. The systems used for ballot definition must be configured securely following conditions outlined in this report and following any Directives and Guidance issued by the Secretary. Any data transfer between the vendor and county must be done using encrypted physical media or secure file transfer process. The file transfer and download must be tracked and audited to make sure that data has not been accessed by unauthorized personnel.

P.   Jurisdictions must implement processes and procedures involving management, monitoring and verification of seals, locks/keys, before, during and after the election.

Q.   Jurisdictions must not use individual voter access cards for activating the ICX Ballot Marking device. This is to avoid lost, stolen or misplaced cards with the activator chip, which would be a potential vulnerability. Jurisdictions using poll worker cards for ICX activation must ensure that poll workers are trained to maintain strict chain of custody of the activation card.

R.   Dominion must ensure that any implementations in Pennsylvania counties must appropriately indicate that the ICX BMD is printing the ballot and the final messaging on the ICX must instruct the voter on how to complete the voting process. Any references to "casting the ballot" must not be present. The changes must be done during implementation by Dominion support personnel and verified by county election officials.

S.   Jurisdictions must have appropriate instructions on the ICX BMD to ensure that the voter reviews the entire ballot before printing the ballot. This is to avoid voters

44

missing selections in contests, especially after voting straight party.

T.   Jurisdictions must work with Dominion to ensure that the entire audio ballot including audio rates and volumes on the audio ballot are tested before deploying to polling places. Jurisdictions must also ensure that poll worker training includes potential situations and questions from voters using the audio ballot. This is specifically important for Dominion Democracy Suite 5.5A. Jurisdictions must note that the general instructions and ballot instructions are configured separately and could have different volume setting and audio rates. This was noted during the Accessibility Examination and made the audio ballot almost unusable before adjusting the volume settings. Specific attention must be given to ensure that the audio ballots are tested by multiple personnel to evaluate the voice quality and the instruction accuracy.

U.   Jurisdictions must work with Dominion during the ballot definition to ensure that voters using assistive devices have clear instructions for the write-in process. The on-screen instructions must be adjusted to have the audio ballot explain the process. The audio instructions must include instructions on how to navigate and find the write-in keyboard.

V.   Jurisdictions must work with Dominion to thoroughly test and review audio ballot instructions to ensure that the voters using an audio ballot can cast the ballot without requesting assistance. Jurisdictions must consider the following while reviewing the ballot:

- The audio ballot must fully inform the voter what has happened on the system and how to select/deselect their choices;

- The feedback messages must explain to voters what is happening, including the number and names of candidates being deselected; and

- The audio ballot must provide feedback on the reason for the changes in any selections and the interaction with straight-party choices.

W.   Jurisdictions must make voters aware that voting straight party is optional via clear instructions on paper, on screen and audio ballots. This is to ensure that the voter

doesn't assume that he/she must make a selection for the straight party contest. The ballot instructions must be approved by the Department and follow any directives and/or guidance issued by the Department. Jurisdictions must also ensure during the election definition process that the straight party contest is excluded from undervote warnings. This is to ensure that the voter doesn't assume that he/she must make a selection for the straight party contest.

X.   Dominion must ensure that the COTS printer used for ICX BMD (HP LaserJet Pro Printer M402dn /HP LaserJet Pro Printer M402dne) must be configured to ensure that the printer settings cannot be changed by the voter at the polling place. The configuration must ensure that the printer settings can only be modified by authorized personnel.

Y.   The electronic voting system must be physically secured while in transit, storage, or while in use at their respective locations. Unmonitored physical access to devices can lead to compromise, tampering, and/or planned attacks.

Z.   Jurisdictions must implement processes and procedures involving management, monitoring and verification of seals, locks/keys, before, during and after the election.

AA.   Jurisdictions must seal any unused ports on the voting system components using tamper evident seals even if the port is inside a locked compartment. Jurisdictions must work with Dominion and use physical port blocking plugs to close unused ports whenever possible before placing the tamper evident seal. The Department also recommends using port blocking plugs for exposed ports for components of the voting system housed in county office that can be removed by authorized personnel when the port is needed.

BB.   Jurisdictions using standalone installation of the EMS server on portable devices must protect the laptops to prevent lost or stolen device.

CC.   Jurisdictions must implement processes to gather and safekeep system logs for each component of the voting system after each election. Consistent auditing of system

logs and reports is vital to maintain system transparency and to ensure that any compromise or malfunction is observed and reported in a timely manner.

DD.   Jurisdictions implementing Democracy Suite 5.5A must ensure that the USB devices and any other removable or transportable media used for election activities is maintained with strict chain of custody. There must be a process to manage the removable/transportable media inventory to avoid misplaced and lost media. The devices must either be replaced or reformatted before use in each election. Appropriate steps must be taken to ensure that the format is a full reformat of the USB devices.

EE.   Jurisdictions implementing Democracy Suite 5.5A must work with Dominion to ensure appropriate levels of training for election officials is planned on implementation. Counties must ensure that the trainings adhere to the "Minimum Training Requirements" specified in Attachment D of this document.

FF.   Jurisdictions implementing Democracy Suite 5.5A must include voter and poll worker training as part of the implementation plan. The training must include hands on practice for both voters and poll workers. Specific consideration must be given to voters using assistive devices and also poll worker education to assist voters with disabilities. Refer to Attachment B, listing detailed recommendations for deployment noted by the Accessibility Examiner.

GG.   Jurisdictions implementing Democracy Suite 5.5A must consider the following during voting booth set up for serving voters requiring assistive devices

> o   Voters with disabilities may have assistive technology or personal notes that they need to place within reach. They may also need room to place the printed ballot on a flat surface to use personal technology such as magnifiers or text readers to verify it.

> o   The path between ICX and the ICP should be as easy as possible, ideally a straight line with no obstructions. The path should include ample room to turn a wheelchair if the machine is positioned with the screen facing the wall. The

47

ADA standards suggest a minimum of 60x60 inches for this.

o   The cords for tactile keypads, headphones and BMD printer need to be placed so that they don't interfere with the printed ballot and the voter's ability to find and take the ballot.

Refer to Attachment B, listing detailed recommendations for deployment noted by the Accessibility Examiner.

HH.   Jurisdictions implementing Democracy Suite 5.5A must ensure that the iButton used for activating administrative access on ICP is managed with strict chain of custody. The iButton pass codes must be modified at a minimum for every election. If an iButton pass code requires change after the initial assignment, appropriate EMS options must be selected to ensure that only the latest assigned iButton pass code is active.

II.   Dominion must submit the following system education materials to the Department of State and must consent to the publication and use of the video on any websites hosted by any Pennsylvania counties and the Pennsylvania Secretary of the Commonwealth or publicly available social media platform. The videos must have audio instructions and must be closed captioned.

o   A video (in an electronic format) for voters that demonstrates how to cast a vote using the Voting System.

o   A video (in an electronic format) for precinct election officials that demonstrates how to setup, operate, and shutdown the Voting System components on an Election Day. The video must demonstrate how to set up and operate the voting system accessible devices for use by voters.

o   A "quick reference guide" for precinct election officials to consult on Election Day. The guide must be specific to the purchasing county's setup and use of the Voting System including accessible options.

o   A "quick reference guide" with images that demonstrates to voters how to cast

a vote. Must be provided in additional languages for any jurisdictions required to meet thresholds in the Voting Rights Act.

JJ.   Dominion must adhere to the following reporting requirements and submit the following to the Secretary:

o   Equipment Reporting. Reported field issues or anomalies that occur in Pennsylvania or elsewhere with any piece of equipment deployed in the Commonwealth of Pennsylvania within 3 days of the occurrence;

o   Advisory Notices. System advisory notices issued for any piece of equipment deployed in the Commonwealth of Pennsylvania regardless of whether the incident behind the notice occurred in Pennsylvania;

o   Ownership, Financing, Employees, Hosting Location. Any changes of information on the Supplier's employees and affiliates, locations, company size and ability to provide technical support simultaneously to several counties in the Commonwealth of Pennsylvania and other jurisdictions that use its Voting System. Additionally, Dominion must provide information on foreign ownership/financing, data hosting, and production for any equipment or ancillary products, including any potential conflict of interest that may have developed for employees and affiliates;

o   Security Measures and any updated security testing or risk/vulnerability assessments conducted by the Supplier or a third-party; and

o   SOC 2 Reporting – Dominion shall provide the Secretary with its annual American Institute of Certified Public Accountants (AICPA) Attestation Standard (AT) Sec. 101 Service Organization Control ("SOC") 2, Type 2 certification (AT Sec. 101 SOC 2, Type 2), or an equivalent certification approved by the Commonwealth. Equivalent certifications include, but are not limited to: International Organization of Standards (ISO) 2700x certification; certification under the Federal Information Security Management Act

49

(FISMA); and AT Sec. 101 SOC 3 (SysTrust/WebTrust) certification.

KK.   Dominion must adhere to the "Source Code and Escrow Items Obligations" specified in Attachment E of this document. In addition, Dominion must provide a copy of the source code on a password protected CD to the Secretary.

LL.   Dominion must work with jurisdictions to ensure that the system is configured to comply with all applicable requirements of PA Election Code delineated in Section Article XI-A of the Pennsylvania Election Code, sections 1101-A to 1122-A, 25 P.S. §§ 3031.1 – 3031.22.

MM.   Jurisdictions implementing the Democracy Suite 5.5A and Dominion must work together to implement system under this certification and must comply with the conditions found in this report, and any directives issued by the Secretary of the Commonwealth regarding the use of this System, in accordance with Section 1105-A(a)-(b) of the Election Code, 25 P.S. § 3031.5(a)-(b). Dominion must ensure that future releases of the voting system with enhanced security and accessibility features are presented for approval to the Secretary.

NN.   Dominion must work with counties and Department to ensure that the system can integrate with the Pennsylvania Depart of State's Election Night Reporting (ENR) system. In addition, pursuant to the Directive on Electronic Voting Systems issued by the Secretary of the Commonwealth on August 8, 2006, the Directive Concerning the Use, Implementation and Operation of Electronic Voting Systems by the County Boards of Elections issued on June 9, 2011 and section 1105-A(d) of the Pennsylvania Election Code, 25 P.S. § 3031.5(d), this certification and approval is valid only for Democracy Suite 5.5A. If the vendor or a County Board of Elections makes any changes to the Democracy Suite 5.5A Voting System subsequent to the date of its examination, it must immediately notify both the Pennsylvania Department of State and the relevant federal testing authority or laboratory, or their successors. Failure to do so may result in the decertification of the Democracy Suite 5.5A Voting System in the Commonwealth of Pennsylvania.

V.   Recommendations

A.   All jurisdictions implementing Democracy Suite 5.5A Voting System should ensure that the system is correctly set up pursuant to all the recommendations of the Directive Concerning the Use, Implementation and Operations of Electronic Voting Systems by the County Boards of Elections issued by the Secretary of the Commonwealth on June 9, 2011 and Guidance on Electronic Voting System Preparation and Security, September 2016.

B.   All jurisdictions implementing Democracy Suite 5.5A should take appropriate steps to ensure that voter education is part of the implementation plan.

C.   All jurisdictions implementing the Democracy Suite 5.5A should ensure that precinct election officials and poll workers receive appropriate training and are comfortable using the system.

D.   All jurisdictions considering purchase of the Democracy Suite 5.5A should review the System Limits as mentioned in the EAC certification scope.

E.   The Secretary recommends that Dominion and counties work with the Department on any changes to their voting equipment including, but not limited to, purchase and upgrades.

F.   Secretary recommends in-house ballot definition activities at county location whenever possible. If an external vendor location is used the county should implement checks and balances to ensure that election data including ballot definition files and audit logs stored on devices outside of the county is protected from unauthorized access.

G.   Secretary recommends configuring the election with only one contest being displayed on each screen presented to the voter on ICX. This is to ensure that all screens presented to the voter are similar and voters don't need to adapt to the situation that there may be multiple contests displayed on a screen.

VI.   Conclusion

As a result of the examination, and after consultation with the Department's staff and the Examiners, the Secretary of the Commonwealth concludes that the Democracy Suite 5.5A can be safely used by voters at elections as provided in the Pennsylvania Election Code and meets all of the requirements set forth in the Code, **provided the voting system is implemented with the conditions listed in Section IV of this report**. Accordingly, the Secretary certifies Democracy Suite 5.5A for use in this Commonwealth.

The ICX can accommodate 4 to 5 voters using assistive devices per hour or around 19 voters per hour when used as the primary voting system depending on the size of the ballot. The ICP precinct scanner can serve 30 voters per hour depending on the length of the ballot.

Attachment A – EAC Certification Scope

To be added when final certification is granted by EAC.

Attachment B – Accessibility Examination Findings and Recommendations

A) Top problems and Recommendations as listed in the accessibility examiner's report

PDF

Top problems -
Dominion.pdf

B) All observations from Accessibility Examination

PDF

All
observations.pdf

C) Other Recommendations for Deployment from Accessibility Examiner report

PDF

Other issues and
recommendations fc

D) Top positives

PDF

Top positives -
Dominion.pdf

Top problems

The following discusses the problems that surfaced during the expert examinations and voter/poll worker observations with the Dominion Voting ICX ballot marking system.

Testing identified five problems that could reduce the ability of people with disabilities to vote independently and privately on the ICX voting machine.

1. Privacy and Independence

What Happened?

The ICX voting system, as it was configured during certification testing, presents two impediments to voters with disabilities voting privately and independently.

- **Machine set up.** The ICX has a 27-inch, portrait oriented diagonal display, which is very large and produces very clear print. Also, as with most modern displays, the screen can be viewed at wide angles without distortion. Also, the machine and printer take up a sizable operating footprint. Which means in most voting booths, the screen will sit near the front of the booth in order to fit.

- **Voter check-in and disclosure.** With the ICX system, voters receive a voter "smart card" from the check-in table that contains all the information the machine needs to pull up the correct ballot. There are many ways a county could implement this system, but it was clear that a card would need to be created for each voter in advance or on demand. There were two types of voter cards: standard and accessibility devices enabled. The second type of card must be inserted by a poll worker to activate the accessibility device options screen, where the preferred device, such as the tactile keypad, switch input, or audible output is chosen. Then, the preferred device is given to the voter.

- **Accommodation screen.** The accommodation selection screen is available only once in the voting process, so it is not possible to try

different accommodations to see which would work best. And, once the voter has begun voting, they cannot change the type of accommodation without canceling the ballot and starting again.

- o **Really only two options.** The accommodation screen presents four choices: Audio-Tactile Interface (ATI), Paddles, Sip and Puff, or Audio/Visual mode. While this suggests that there are four modes of interaction, there are, in fact, only two. The ATI, Paddles, and Sip and Puff selections produce identical behavior. The Paddles and Sip and Puff choices, from the point of view of the voting machine, are identical, as would be any user-provided switch input. In all three methods, the machines "listens" for input from the switches and provides auditory feedback. In the fourth choice, Audio/Visual mode, the system provides auditory navigation and feedback, but does not listen for switch input.

- o **Active touchscreen, all the time.** In all four modes, the touch-screen remains active. When the voter touches a control for the first time, its purpose and content is announced, but not selected. A second touch selects the control and activates it (if a button). On second touch, the content of the choice is repeated aloud, which allows a voter with low-vision to explore the screen by touching various controls and hearing their function without accidentally making choices.

This behavior for various switch and audio modes is not well implemented. A person who elects to use the switch input will not touch the screen for control, as that is beyond their capability (hence the use of the switch interface). However, if a switch user needs assistance from another person, the double-touch function means the poll worker or aide must touch each choice twice. In these cases, the two-step selection is an unnecessary burden. Since the switch user (blind or sighted) would be using a personal listening device such as the provided headphones or personal headset, the selected choice being read prior to the selection would not be apparent to the

person helping, and learning the two-step selection could be difficult.

Why is this a problem?

The poll worker setup and required voter disclosure are problems for three reasons.

- **Bright and clear.** Anyone within 10 feet of a booth, including in nearby booths, can observe the selections of any voter.

- **Voters cannot independently choose and initiate their preferred voting method.** For a voter to have access to the assistive devices they must declare their need at sign-in, and receive a different activation card than that provided to non-disabled voters. In some cases, such as blindness or mobility impairment, the disability is overt, and there is no loss of confidentiality. When such a voter enters the polling place, their need for accommodation is readily apparent, and there is no additional exposure from requesting an accommodations card (and generally the assistance of a poll worker in setting up the machine).

  Because a poll worker must initiate the accommodations, and then walk away, there's no method where the voter could do this by themselves and then test the different devices.

- **Social stigma and privacy.** There are other types of disability that are not readily apparent, and those living with these limitations would also benefit from the available accommodations. For example, voters with low literacy or cognitive impairment would benefit from the audio/visual assistive option, but might not understand that the accessibility options can help them vote more effectively, or they may not wish to reveal their status to the poll workers and the community. The ICX voting machine requires this disclosure to activate the accommodations.

Recommendations

The recommendation for the physical privacy concern is relatively straightforward. Counties will need to think about how a polling location is set up. Keeping the open side of the voting booth close to a wall and ensuring adequate clearance around the voting machine can help. Also, exploring different voting booth manufacturers and types. One that is deeper and allowed the machine to be pushed back into the booth could provide enough side-to-side privacy.

A county choosing this machine will have to do at least two things *before* Election Day to ensure poll workers and voters are successful.

- **Poll Worker accessibility training.** Counties can create a poll worker accessibility training component that gives poll workers tools to effectively help voters with disabilities. Counties that already have this type of program can evaluate it against this machine's requirements. Such training programs could include ways to identify voters who may need assistance, how to appropriately ask a voter if they need assistance, and how to assist a voter once identified.

- **Voter education and demonstrations.** Officials can create voters with disabilities education and demonstration events around the county. Here, voters can learn how to use the new machine, and the county can demonstrate all the machine's accessibility features. While demonstrating them, officials can give examples of who could benefit from using each assistive device, and especially include examples of voters most would not immediately identify as having a disability. For example, an older voter with sight problems might benefit from the additional audio instructions. Or a diabetic with neuropathy in their hands may prefer to use the dual-switch paddles. Both examples of voters may not have known the options and devices were available before.

A strong two-pronged training and education program will help poll workers be more comfortable with assisting voters with disabilities. Having who know all of the accessibility options and well-trained poll workers will make voters feel more comfortable asking for assistance on Election Day.

2. Audio Quality, Instructions, and Feedback

The ICX voting machine had a number of problems with the audio quality, instructions, and feedback.

What happened?

The ICX machine uses two distinct voices for its audio interface.

- **Instructions.** One voice, used for instructions, appears to be prerecorded synthesized voice that will remain constant across elections. This voice is well articulated and clear, but was considered "harsh," "not good," and "rinky-dink" by voters who were more experienced with the state-of-the-art voices provided on their personal devices. The pacing and phrasing of this voice meant it was difficult to know when a sentence started and ended. For a brief announcement, this voice would be acceptable, but the long-term use was a problem (see below).

- **Ballot content.** The second voice uses text-to-speech and reads the content of the ballot. Unlike the pre-recorded voice, this voice is "live," somewhat "fuzzier," and less harsh than the instructional voice.

As delivered, these two voices had five problems, one of which was corrected before the voters arrived.

- **Volume difference.** The first, correctable, issue was that the voices started at quite different volumes. When the instructional voice was set to a comfortable level, the content voice was nearly inaudible. This problem was fixed by an adjustment by the manufacturer, but should have been tested before delivery.

- **Rate of speech and voice quality.** The system allowed voters to change the rate of speech, which is common for audio assistive devices. The range of speech rates was very different between the two voices. The instructional voice could be slowed by as much as 50%, and accelerated by approximately 200%. The content voice, by contrast, could be sped up by about 600%. An increase in the rate of the instructional voice from 100 words per minute to 110 words per

minute might result in a change of the content voice from 100 wpm to 200 words per minute. After the initial orientation to the machine, voters were more interested in the information provided by the content voice. These two voices need to respond similarly to the settings.

- **Audio and tactile keypad.** At the top of the keypad, there are controls to adjust the rate and volume of the auditory feedback. These buttons are convex on top to indicate increasing, or concave to indicate decreasing the assigned function. Below this are five buttons: a right-left pair, the select button, and an up-down pair. At the bottom of the keypad is a "Help" button that reaches from side to side.

  On the lower edge of the keypad are ports for headphones or access switches. These ports are physically identical (3.5mm phono jacks), and have nearly invisible raised labels (black on black). There is no Braille marking on the ports.

  The tactile keypad's navigation buttons do not have a unique function in this voting system.

  - The yellow, left and right buttons and the blue, up and down buttons do exactly the same thing. During the ATI instructions, this was not stated. The instructions described the yellow-and blue-buttons as having different functions. At each step, the buttons were described by color, shape, and function: "the yellow, left-arrow button to move left," or "the blue up-arrow button to move up."

  - The single exception to this was the select button. In the Help instructions, this was identified as the "red, x-shaped select button." However, throughout the audio narration on the machine, this was only described as the "red select button." Several blind voters commented, "Why do I care what color it is?" When it was explained that a person with low vision might use this interface, and might be able to use the color as an aid, they were accepting, but the select button, being used so

often, should have been identified, using this logic, as x-shaped rather than simply "red."

- **Persistence and repetition.** The phrasing of audio commands should place the most important information first. This allows the voter to attend when the narration of interest, and think about other things when it is not.

  o The same instructions played every time a voter pressed a button in the same contest area. The instructions only changed when they moved to a new contest area or page. Also, if the voter paused to think about the next action, the instructions would immediately start to play again. Voters stopped thinking about voting to listen to the voice to ensure no new information was available. After voters figured out the pattern, they stopped listening to the instructions altogether.

- **Instructions content.** The content instructions are also long, confusing, or unhelpful.

  o The audio instructions for the Dominion system repeatedly said "Use the yellow, right-arrow button or the blue down arrow button to move to the next item." This long text was confusing. More efficient wording might simply ignore one set of buttons, for example, "To move to the next item, use the blue down-arrow button."

  o The introduction to the write-in screen says that you can write-in a candidate of your choice, but does not provide guidance on how to do that. This disturbed even the sighted voters, but every blind voter had to be cued to move beyond the box announced as "Write-in candidate, blank" to find the keyboard.

Sometimes the voting instructions on the screen are poorly worded.

  o The screen to select a straight party vote, the instructions say "You may select the party of your choice by selecting the party of your choice."

Why is this a problem?

To some extent, the audio instructions and content feature of the Dominion system may suffer from an "uncanny valley" where it is close enough to good to be annoying, though it is actually better than the feedback from some of the other machines we have evaluated.

Blind users typically want their text-to-speech voices to speak at rates above 400 words per minute, so that they can listen at the same rate sighted people can read. Many blind individuals read at speeds in excess of 600 words per minute, and up to 1000 words per minute (the limit of current technology). People with cognitive limitations such as auditory processing disorders may need the voice to speak more slowly, to give them time to understand it.

Voices designed for screen reading do not necessarily sound like human voices, but remain understandable over a wide range of speeds. To accomplish this, the components of voice that carry information are identified, and the filler sounds between those components are stretched or shortened to change the overall speech rate without loss of intelligibility. People who routinely listen to synthetic voices expect this.

The voices used in the Dominion voting machine are not this sophisticated. To increase speech rate, it appears that they simply slice sections from the sound stream. To slow the voice down, they insert silence at intervals in the sound stream. This approach is "effective" for compressions and stretches of 10 to 20%, as the human brain can fill in the blanks fairly effectively. However, the Dominion system attempts to use this technique with slowing to as little as 50% of the speech rate, and increasing rate by several hundred percent.

The use of two audio voices for instructions and ballot content in and of itself is not a problem (in fact, it meets the WSG requirement that they be different). But Dominion's implementation of the voices is a problem for at least two reasons.

- **Election Day Ready.** The ICX seems to have a lot of configuration points, which could be a good thing for counties. However, when many of the settings, like the disparate volumes between instructions and content speech, are not usable out-of-the-box, some counties

may not know that they need to make those changes for an option to be usable.

- **Cognitive overhead.** Voters had to concentrate excessively to understand what was being said. At the lower three speed settings, the instructional voice was noticeably broken up, and at the highest two settings the gaps made it impossible to process what was being said.

When voters have to interpret poorly written instructions, it means they are not thinking about voting. This is made harder for voters using the audio when the quality, rate, and phrasing mean they are spending more time figuring out how to use the machine than they are on which candidate is best for the contest.

Recommendations

Counties choosing this machine can ensure that they:

- Test the audio rates and volumes before deployment to make sure they are usable for both blind voters and others who might use the audio.

- Train poll workers well on the potential issues and questions voters might have about using the audio while voting.

- Provide community demonstrations so voters can practice with the machine. Voting on Election Day may be smoother if they know what to expect.

Also, if the audio style and content is configurable, counties should ask the vendor to do the following:

- **Use better voices.** Many of the blind voters demonstrated the voices they use on their personal assistive devices, and explained why they were better. Much better voices than those on the tested system are available for purchase or license. The vendor could provide a synthetic voice that is designed for high compression levels such as those used in commercial screen readers or cell phones.

- **Include verbosity control and contextual help.** The blind voters all indicated that they would prefer some verbosity control on the audio instructions, or changing the level and wordiness of the help as needed. In the initial orientation, the full names could be used. Once the voter is oriented, though, this could be contracted to "Use the arrows to move forward or back." If the voter got confused, the Help button on the ATI could be configured to provide more detailed instructions about the current screen.

3. The Write-In Process

The write-in screen and process presented two problems for voters using the audio assistance.

What happened?

When visually choosing to write in a candidate on the ICX, the voter enters the write-in screen and is presented with a text box, where the write-in name will appear, editing buttons ("Clear all" and "Delete"). Below this is an on-screen keyboard in alphabetical order to enter the name of the chosen candidate. At the bottom of the screen is a button to confirm the write-in and return to the ballot. This all makes sense for a sighted voter because the layout is clear.

- **No instructions.** There were very few instructions for sighted voters, but the layout of the screen made use self-explanatory for everyone in this test. The audio had no additional instructions beyond "Please enter your write in candidate." Then when the voter navigated to the next option, they only heard the voice say the text box was empty. Voters became caught in this area for a long time. The "Help" button on the tactile keypad only gave voters instructions on how to use the tactile keypad.

  All of the blind voters needed facilitator assistance to successfully write in a candidate. Each voter had trouble moving beyond the write-in name box. But once they advanced to, and heard, "A," they rapidly and generally accurately typed the name of the write-in candidate. At intervals, the users *could* navigate to the write-in name box to hear

their entry spelled back to them, then return to typing. None of our blind voters discovered this capability.

- **Editing Problems.** The Dominion ICX had implementation problems with editing a name once it had been entered and using the audio assistance.

  o **Deleting.** The only option for editing an error in name entry is to delete letters or the entire name and start from scratch. For sighted voters, this makes sense visually. They can see the letters disappearing and can easily see what letters remain. For blind voters using the audio, each letter is announced when typed, but when deleted, the key announces only "Delete," and not what has been deleted.

  o **Repeating too soon.** If the voter stops to consider what they are doing while editing a name, the ICX repeats the last audio instruction given. While this is not ordinarily more than an annoyance, in text entry it can be challenging. If the name being written in has a double letter, and the user pauses to think about the spelling of the name, the system will repeat the last instruction, "You selected 'M'." If this occurs as the user presses the select key to double the "M," it is not clear whether a second "M" has been typed, or if the audio has just repeated the previous letter. The user must navigate to the name box to hear the name spelled out to find out how many letter "Ms" have been typed. (This process is not described in the audio instructions, and must be discovered by the voter.)

  o **Does not voice the "Space."** The "space" character between names is not voiced. A blind voter may have forgotten to enter a space, but would not know.

  o **No reentry.** True for all voters: If a voter has entered a write-in name, returns to the ballot, and then realizes that the name was misspelled, touching the write-in option again clears the text in the box.

Why is this a problem?

While it is arguable that the write-in process has very little impact in most contests, all of our voters and poll workers were very interested in the usability of the write-in process. And all functions of a voting machine should work effectively for each voter. It does not always have to be the same method, but the outcome should be the same. Not being able to effectively edit a write-in name is a major problem for two reasons.

- An entry the voter thought was cast correctly because there were no audible mistakes might still be voided because of inaudible errors.

- Limited instructions combined with editing problems can lead to voter confusion. Even if they can figure out a method to get the system to voice what is actually in the text box, it takes an inordinate amount of mental resources. Resources that some voters cannot spare and should be reserved to deciding who to vote for.

Recommendation

We recommend the following changes to the write-in system:

- Adjust the on-screen instructions so that the audio reads it.

- Include audio instructions how to navigate to find the keyboard.

- Rework how the system voices deleted characters and the frequency it repeats them.

- Include any and all spaces and special characters in the text box when reading the entry to the voter.

4. Silent/Hidden selection and deselection

What happened?

There were three elements of silent and/or hidden selection and de-selection on the ICX that voters found confusing. In most cases, voters were able to mark their ballot as instructed through trial and error, but in others, they did

not notice changes made by the system and might vote in a way that does not match their intent.

- **Destructive candidate deselection when changing a straight party contest**
  After making a straight party choice, if voters wanted to vote for additional candidates from another party or "scratch" and change party for that contest, the system automatically deselects all of the other pre-marked candidates. In a contest with a short list of candidates, this behavior, dictated by the PA Method, caused confusion, but with persistence voters were able to select the candidates specified in the instructions. When the voters were asked to vote for just one of the three automatically selected candidates, they universally attempted to deselect an unwanted candidate by pressing on that candidate's name. Because of the interpretation of the PA Method, this resulted in confirming the vote for that candidate, instead of deselecting that candidate, as the voters stated they had expected. The voters were, in this case where the changes were evident, able to correct the error and vote as instructed. (Please see more about candidate selection in the next section)

- **When the contest was long, candidates were often de-selected on a different screen, with no notification from the system**. For sighted voters, this automatic change resulted in candidates who had been selected not being voted for as intended by the voter. For audio users, no deselection is voiced at any time.

- **Overvoting protections do not protect audio users**. Once a voter selects the maximum number of candidates in a contest, the system greys out the remaining options. This is a strong protective feature and intuitive for a sighted voter. The sighted voter is able to scan through the remaining candidates and find others who s/he might prefer, and change selections. However, when using the audio assistance, this way of handling overvote protection removes the ability for the system to read the remaining candidates, so a voter may not hear all of the options.

Why is this a problem?

The system relies on voters perceiving the change in selections and understanding why those changes have happened. This is a problem because:

- All voters should have control of all selections.
- Off-screen actions force all voters into problem solving. This is worse for voters using the audio format or a dual switch because navigation is more difficult.
- Voters with cognitive disabilities may be unable to understand what has happened when the interface is unpredictable and/or inconsistent.
- If a voter has to ask for assistance in the middle of the ballot, their privacy and independence are compromised.
- Ultimately, voters may vote in a way they had not intended.

Recommendations

While the machines must comply with the "Pennsylvania Method" of straight party voting, there are ways to fully inform the voter of selection and deselection changes. For example:

- Create meaningful audio feedback messages and confirmation processes to tell voters what is happening—including the number and names of the candidates being deselected. No selection or deselection should ever take place without explicit action or confirmation from the voter. Language should be included like: "If you do X, these voters will be deselected" or "Are you sure you want to...."
- Be consistent and toggle all selections on and off when touched or selected with the tactile keypad, including selections made when the straight party option is active. This is consistent with how selection and deselection works in general and is not destructive.

5. Paper ballot handling

One of the goals of the voting machine upgrade is to allow all voters to vote independently and privately, including verifying their ballot. All paper ballots introduce barriers for voters with low-vision, no-vision, and with limited dexterity.

Most voters appreciated the printed ballot, which allowed a second chance to review the vote before casting. The implementation of the printing and paper-handling of these paper ballots had some issues that limited the ability of voters to use them effectively.

Reading the paper ballot

For the Dominion ICX ballot marking system, the ballot is printed using a separate, off-the-shelf printer on 8.5 x 11-inch cardstock. The cardstock is stored inside the printer next to the tablet. This means that voters do not have to handle a blank ballot before making choices.

It also means that there is no feature to allow a voter to "read back" the ballot by reinserting the printed, completed ballot into the voting system. Three of our five blind voters were able to use app-based print readers on their phone to take a picture of the ballot and read it back to them. This is only an option for voters with this technology. There is no built-in option for all voters.

The paper ballot included alerts and language that was not used on the touchscreen. For example, undervoted contests are called out with "UNDER_VOTE_BY_N" where N is the number of positions still available. The ballot review screen does not do this, which means it is not announced to visually impaired voters using the audio assistance.

Interacting with the ICP ballot scanner

The scanner had both positives and negatives. In general, the ballot scanner does not produce any major accessible voting barriers.

Only one feature stood out and could be considered a positive for voters with disabilities.

- Voters may insert the ballot in any orientation. This provides another layer of privacy and limits the potential failures. However, this was not clear to any of the voters or poll workers. Each asked how to insert it.

The most serious problems are:

- The scanner bed is very shallow so the entire ballot does not fit on it. Only the top third of the page can be rested on the scanner. Voters with no/low use of their hands would rely on assistance for feeding the ballot into the scanner. And the supplied privacy sleeve was of little help because it was not designed for use with these ballots. Some of the test participants commented on these issues.
- There are no audible cues. The scanner did not include robust features to alert voters that their ballot has been cast successfully.
- If the ballot is not perfectly aligned as the scanner begins to grab it, the scanner will spit it back out. If the voter is not ready for this, the ballot will fall to the floor. This is a problem for all voters but potentially very embarrassing and frustrating for those with disabilities.
- There are subtle visual cues from a small screen that notify voters that the scanner is ready, reading a ballot, and finished scanning. These were not available for voters with low or no vision. Also, the quality of the screen is poor. If the voter or poll worker is not directly over the screen, it is difficult or impossible to read.

While the voter does not spend as much time interacting with the ballot scanner as the touchscreen machine, there are barriers for voters with disabilities that can limit voter privacy and independence. If a voter must ask a poll worker for ballot scanning assistance, this increases the likelihood that the poll worker will see how the individual voted.

Recommendations

For the printed ballot layout

- Make the alerts and language on the ballot and touch screen consistent.

For the scanner

- Increase the length of the scanner bed so that the full ballot can sit on it before inserting it into the machine. This will help low mobility and dexterity voters and will catch the ballot if it is inserted incorrectly.
- Make the cues more obvious that the ballot is cast. Large print words or simple images to indicate the scanning steps on the screen, and a stronger visual cue can show that the ballot scanned successfully. Adding a subtle audio cue that the ballot scanned properly would help blind or low vision voters confirm their ballot was cast.
- Train poll worker to assist voters in ways that do not compromise the voter's privacy. This might include having standard instructions for poll workers to use to guide a voter in casting their own ballot, or narrating the poll worker's actions so that the voter understands what the poll worker is doing.

Other issues for deployment

A few other issues produced consistent enough observations to call them out in some detail.

Alerts

Both the poll workers and the voters were uncomfortable with the language of the on-screen warnings.

In general, they felt that warnings were appropriate for conditions that might invalidate a ballot, where "alerts" would be appropriate for acceptable conditions that could be changed.

- **"If left blank, this contest will have implicit choice selections for party [straight party choice]."** One of the most egregious involves any contest that is left blank, but the voter selected a straight party. In this case, the system provides an alert that says "If left blank, this contest will have implicit choice selections for party [straight party choice]." The system does not have an immediate way to straight party vote *and* abstain from a contest, which is a problem in and of itself. But the high-level language in the alert confused most voters and poll workers. And all said that the message needed to change.

- **"Your ballot is valid, but there are warnings."** If a voter does not select a straight party, the review screen first indicates that "Your ballot is valid, but there are warnings." Then, the straight party contest alert indicates that "This contest is blank." The wording of this alert suggests that the straight party selection is a ballot contest rather than a convenience, and that selection is mandatory. In either case, the language is unnecessarily harsh and coercive.

- **"This contest is undervoted!"** If a voter does not select all of the available candidates in a contest, they receive a warning that the contest is undervoted. "Undervoted" is not a clear language term, and is potentially confusing to voters. The warning also suggests that full voting is required.

The language of on-screen or audio "warnings" should be informative, not coercive, and should be in plain language. Where possible, counties should work with the vendor to reconfigure or rewrite these warnings.

Poll Worker Concerns

Poll workers were very excited about the ability of the scanner to tabulate absentee ballots. However, they had some concerns about the touchscreen and general process.

- **Power needs and cords.** Several poll workers commented that the machine included the ballot marking tablet and a separate printer. They were concerned about the power requirements this would present in some of their polling places. Combined with the wires for the headphones and access switches, they felt that the number of cables would be a burden to manage in the polling site.

- **Lots of pieces.** The poll workers were concerned about managing the "parts" of the process. This machine uses activation cards to select the appropriate primary ballot by party, and uses different cards for "normal" versus "accommodated" voting. In polling places that serve more than one precinct, each might have a different ballot. This suggests the need for many types of cards, or new system entirely to manage at the voter check-in area. The scanner also has compact flash cards and security keys. They did not like the idea of complicating the voting process with additional things.

- **Casting the ballot and traffic management.** Poll workers were also worried that the voter must carry the ballot from the voting machine to the scanner and ensuring they actually fed the ballot into the scanner. This has been a common concern from poll workers who do not currently use paper ballots. However, this concern was justified in this instance because of the language on the print ballot screen.

  o When you press the "Print" button at the end of voting, the machine produces a new window with an alert. It has a message "Some warning detected on your ballot. You cannot make any more changes after casting the ballot." Then there are two buttons labeled: "Cast your ballot" and "Review your

choices." To make it worse, the final screen says "Thank you for voting! Your ballot is successfully cast." This language choice is misleading and incorrect. The touchscreen device just creates the ballot and printer prints it. The ballot is not "cast" until it has been scanned by the tabulator.

- o Poll workers became worried that voters may misinterpret these screens and just walk away. Since many voters desire a receipt for voting (to validate time off from work or credit for school), they might think that they had indeed cast their ballot (because the machine said they had), and the printed copy is their receipt.

- o The poll workers were anxious about traffic management to assure that the ballots and cards all came to the scanner. They suggested that a message on screen when the ballot was printed would help. It could instruct voters to take their ballot and activation card to the scanner to cast their ballot.

- The poll workers were uneasy about the comfort level of the older voters with change in the process. They all agreed that having the machines available in public spaces (libraries) prior to the election to allow voters to try them would be important.

- There was some apprehension about the use of compact flash cards to record tallies. These are small, and may be difficult to manage from some workers with limited dexterity.

Candidate Selection

The Dominion software uses two levels of candidate selection, which interact in two different ways from the point of view of the voter.

- **Soft Selection vs Hard Selection.** The first level of selection might be called "soft-selection." When a voter selects a straight party ballot, the candidates from that party are soft-selected and pre-marked throughout the ballot. This will count as a vote unless modified by action of the voter, as discussed in the "implicit" alert area above.

If a voter touches the screen to select a candidate without a straight party choice, this direct action creates a "hard selection." If a soft-selected candidate is touched by the voter, this converts the soft-selection to a hard selection.

- **Cannot leave a straight party contest blank.** Once a voter selects a straight party, the machine will not allow a voter to abstain from any contest. As mentioned in the "Alerts" section, the machine informs the voter that a blank contest will be marked as straight party—even if the voter leaves the names unselected. As one voter discovered on her own, she could effectively abstain from the contest by submitting a blank write-in entry. This is not an appropriate work around.

To the voter, soft-selected and hard-selected votes look the same. This is logically sound, but has unexpected repercussions.

- **Destructive behavior.** If a voter decides that they want to remove a straight party selected candidate in a "Vote for N" contest, they will try to deselect that candidate by touching or selecting that candidate. Instead of deselecting the soft-selected candidate, it converts it to a hard selection. This was not what the voter intended, so naturally the voter touches the selection again. This results in deselecting the candidate, and also deselecting all of the other straight party votes in that contest. This unexpected destructive behavior confused sighted voters.

- **Soft-selection cue.** All of our blind voters, when instructed to vote for an in-party candidate, reselected that candidate, making the selection a hard selection. This suggests that the cue that the candidate had already been soft-selected was not adequate to alert the voter, and might result in unintended cancellation of other in-party candidates.

There were additional candidate selection issues that confused voters.

- **Number of available candidates vs number of selected candidates.** In contests where the voter is allowed to select multiple candidates from the presented roster, there is no indication of the number of candidates available. Nor, after selecting one or more

candidates, is there indication of how many candidates have been selected.

When the roster of candidates is longer than a single screen, or for all blind voters, it is not clear how many candidates are available. This could be remedied by messages that say "Vote for 5 of the 23 candidates" and "You have voted for three of the allowed five votes." When the voter has selected fewer than the allowed number of candidates, they are presented with a warning that they have "undervoted" the contest. It was not clear to our voters what "undervoted" meant, and the language of the warning suggested that this was not a valid vote, and that all five candidates must be selected to be appropriate.

Not all of the issues in this section have clear workarounds or immediate vendor-provided solutions. Counties should have extensive poll worker trainings and many opportunities for voter education to ensure all poll workers and voters know how to successfully cast each vote at the polls.

Reviewing and verifying the ballot

Voters with disabilities will also need voter education on how the ballot review and verification process works for the combination of presentation and interaction mode they are using. This is particularly important because of the use of straight party voting in Pennsylvania

In this voting system, it is possible for a voter to select a straight party option, go directly to the review screen, and then directly to print without any notification from the ballot marking device that they have undervoted any nonpartisan contests or ballot questions.

A blind or low-vision voter who cannot easily verify the printed ballot might never learn that they skipped contests, especially if the precinct ballot scanners are not programmed to report undervotes.

One solution to this would be for the audio at the beginning of the review to announce if there are undervoted contests (and perhaps how many there are).

Recommendations for deployment

The participants – and examiners – saw the systems being tested for the first time during the examination. Many voters will also try using a new system for the first time in the voting booth, so our test was realistic for Pennsylvania voters.

The problems we encountered also suggest ideas for how election officials can support voters and poll workers as they introduce the new system and design their processes and procedures.

The recommendations here are based on observations of how both poll workers and voters used the system and direct suggestions they made.

Advanced training and hands-on practice

The need for an introduction and a chance to try out the system before Election Day was the strongest recommendation from every poll worker participant.

Poll workers felt strongly that any new system – particularly those with digital interfaces – would be intimidating to voters and fellow poll workers who were not used to computers. They recommended:

- Longer training sessions for poll workers to give them more time to familiarize themselves with a new system.
- Opportunities for hands-on experience, including scenarios for different situations they might have to handle.
- An aggressive voter education program to give voters a chance to try out the new system.
- Outreach to voters with disabilities, including those who regularly vote with assistance to let them know about the capabilities of a new system that might help them.
- Have voting machine hands-on demonstrations at disability events so that voters can get to know the machines, practice voting, and be prepared for what they may need on Election Day.

- Instructions or a practice system in the polling place, especially in districts with many older people.

Training for poll workers to support voters with disabilities

Poll workers may not be familiar with how to help people with disabilities. Most of the poll worker participants said that they had no blind or disabled voters in their polling places, although one pointed out that the features on these systems might enable their "assisted voters" to try voting independently.

In addition to a good training module on ways to help voters with disabilities, the training should focus on how to give instructions before and during a voting session to avoid compromising their privacy. For example:

- A "what if" troubleshooting guide could include specific questions to ask and prompts that poll workers can use to help a voter with problem solving without looking at the screen.
- Give poll workers guidance on where to stand while supporting voters. For example, standing behind the ICX and facing the voter would make it clear that they are not looking at the screen.
- Using the procedures for initiating a voting session, including the screens to select a language or acknowledge that assistive technology has been activated, to make sure that the voter has found the basic navigation keys on the keypad. On the ICX, the setting and preferences buttons are at the top of the screen at all times. The poll worker can review these with the voter (reading the instructions to be sure they are consistent and accurate).

Poll worker procedures

Poll worker procedures can also help bridge any information gaps for voters, with instructions embedded in the voting process.

- Tell voters how to insert their ballot: identify that the ballot must be placed in the center of the scan bed, and tell them the ballot is inserted directly into the machine, not just slid forward.

- Remind voters to check both the review screen and their paper ballot before casting.
- Tell voters that if they make a mistake, they can get a new ballot.
- Instruct voters that their ballot can be inserted into the scanner in any orientation. Using the privacy sleeve is the most secure. However, inserting the ballot upside down, with the print toward the floor, is sufficient.

Support for voters using the tactile keypad or dual switch and audio ballot might include:

- A keypad they can try out before entering the voting booth.
- Instructions for how to use the keypad in Braille, audio, and large print.
- Test all assistive aids with local voters.

As a voter approaches the voting station, poll workers can help voters adjust the voting system or attach personal assistive technology:

- Help voters get positioned at the voting system so they can reach all controls. The ICX screen can be adjusted to change its angle for a closer approach, adapting to standing or sitting postures, and avoiding glare.
- Provide help plugging in personal headsets or switches with verbal instructions or by doing it for the voter.
- A voter with a disability is likely to know how to plug in their personal headset or switch, but they will not know the location of the jacks on the machine. On the ICX, the tactile keypad includes two 3.5mm jacks that seems appropriate to insert a headset. One is marked in very small letters that it is for audio. However, the other jack is where the dual switch connects. Counties should ensure poll workers explain the two jacks to voters, at a bare minimum.
- Make sure voters are oriented and know where all parts of the voting system are, including the privacy shields. The ICX includes options to blank the screen during the audio ballot, but then poll workers could bring back the visual mode if the voter has a question.
- Remind voters how to cast their ballot and how to know when they are finished.

Polling place setup

Ensure all polling locations have at least one accessible voting booth with a chair that is easily removed if a voter uses a mobility device.

Voters with disabilities may have assistive technology or personal notes that they need to place within reach. They may also need room to place the printed ballot on a flat surface when using simple personal technology, such as magnifiers or text readers to verify it.

For all voting machines, the path to the touch screen and the scanner should be as easy as possible, ideally a straight line with no obstructions. The path should include ample room to turn a wheelchair if the machine is positioned with the screen facing the wall. The ADA standards suggest a minimum of 60x60 inches for this.

Use assistive technology to support blind and low-vision voters in verifying their ballot, for example, a magnification unit or a simple OCR scanner.

Voting booth setup for this system

Two issues were identified specifically for this system during the examination and usability testing related to how the system and attached devices are placed. The system fits very tightly in the accessible voting booth supplied by the vendor for the exam.

- **Cable management for assistive devices.** The tactile keypad is normally stored behind the screen, connected on a semi-permanent cord. The headphone is plugged in on the right-side front of the tactile keypad. The printer could be set up to the right or left.
  Recommendation: The cords need to be placed so that they don't interfere with the printed ballot or the voter's ability to find and take it.
- **Privacy.** The screen for this system sits close to the front of the booth. It is easy to read the crisp, clear screen display over the shoulder of someone sitting down, or from the side, especially when large text is used.
  Recommendation: Position the booth so the voter's back is to a wall, so no one can walk behind them, and with sufficient space to the left and

right that people cannot "peek" from the side. However, be sure that there is a good path for a manual or motorized wheel chair to get to the voting booth easily (see above).

All observations

Voter comments and reviewer observations about each machine are described below. For each are, the observations are organized by the machine function then by the severity.

Positives

Function	Observation	System	Severity
General	Blind voter/poll worker - "Once I understand the system, I can whiz!"	ICX	Positive
Display and Navigation	Large, clear, easy to read screen. The screen angle can be changed to three angles: flat, slight incline, and almost vertical.	ICX	Positive
	Default font large enough for most sighted voters.	ICX	Positive
	The system prevents overvotes by greying out the remaining options once the voter has selected the maximum number of candidates in a contest.	ICX	Positive
	Alerts are generally well formatted and in appropriate places. The wording in the alerts is not good, however. (See Problems section below)	ICX	Positive
	The ballot review button is always visible and functional. Voters don't have to review the entire contest or ballot to navigate to the review screen. Likewise, the print ballot button is always available from the review screen.	ICX	Positive
	Large "scroll down/up" buttons at the top and bottom that span the width of the screen.	ICX	Positive
	Straight party vote indicator that allows you to turn on and off straight party votes at any point.	ICX	Positive

Function	Observation	System	Severity
Display and Navigation	Ballot review screen is generally well formatted. Alerts are present in each contest where necessary. In blank or undervoted contests, a "No selection made" label is present for each potential vote for number.	ICX	Positive
Assistive Technology (AT)	Voter - "The disability functions are the best features."	ICX	Positive
	AT includes an audio mode that leaves the screen enabled. The first screen touch reads the selection, and then the same item touched a second time selects it.	ICX	Positive
	If the voter chooses the assistive technology, the touch screen is still active for those who may want to use both.		
	Poll worker commented that these machines would help counties find accessible locations for the machines.		
Write-In Screen	Once a blind voter found the on-screen keyboard, they were able to enter the candidate name quickly.	ICX	Positive
	After completing the write-in, one blind voter said, "That was easy."	ICX	Positive
Printed Ballot & Scanner	While sighted voters (and poll workers) generally did not want to check the printed ballot, blind voters generally did. The use of card stock made the ballot easy to handle. The card reader at the base of the screen created a make-shift easel. Voters could rest the ballot against the machine and use personal AT devices to verify their ballot.	ICX/ICP	Positive
	Seeing AI and other personal AT were able to read the printed ballot to the voters successfully who attempted it.		

Function	Observation	System	Severity
Printed Ballot & Scanner	After the ballot printed, one voter responded "Neat!"	ICX	Positive

Problems

Function	Observation	System	Severity
Setup for Voters	Concern about the power requirements (marker and printer use separate power cords) and confused cables for tactile keypad, speaker, switches, and headphones with power cords. Counties will need to ensure polling locations have enough outlets available, and they will need to think of strategies to contain the cords.	ICX/ICP	Annoyance
	This machine has a lot of additional parts: memory cards, voter cards, access keys.	ICX/ICP	Annoyance
	"Seems like a lot of parts to the process. Our voters will get confused."	ICX/ICP	Annoyance
	Poll workers were concerned if their county did not switch to an electronic poll book, then they would have to have another system to create voter cards on demand.	ICX/ICP	Annoyance
	Poll workers felt that early hands-on exposure to the machines should be provided several weeks before the election, so that voters could become familiar with the process.	ICX/ICP	General comment
Privacy	Because of the large screen size and clear print, some voters were concerned about privacy. It was easy to read the display from several feet away.	ICX/ICP	Annoyance
	When privacy cover is used on ballot, the ballot cannot be inserted to the bottom of the sleeve. The top of the ballot must be outside the sleeve for the scanner to pick it up.	ICX/ICP	Annoyance
Orientation and Navigation	For one contest on the sample ballot, (County Commissioner), the down-contest candidates are not visible on the initial screen. If it were indicated that there were "X Candidates" in total, the voter would be cued to scroll down to find them.	ICX	Problem solving

Function	Observation	System	Severity
Orientation and Navigation	If a voter wants to quickly vote straight party, the system allows selecting straight party, then review, then print. In this process, however, the voter is never presented with the ballot questions. If they do not review their ballot entirely, they receive no warning that any non-partisan contests are blank.	ICX	Problem solving
	As part of the overvote protection, the additional candidates or options are greyed out once the maximum number of selections has been reached. However, this means that the audio does not announce the additional candidate names. This could lead to a voter missing a desired candidate.	ICX	Likely to prevent independent voting for voters with some disabilities
	When using the audio, the straight party button is present in all contests. Every blind voter got stuck on this button and the instructions are unclear as to what the button is or how to navigate away from it.	ICX	Needs Assistance
	No blind voter was able to do the write-in process without some assistance. Most navigated to the box where the name appears, and stopped. No instructions describing the process are available. Once the voter pressed the down or right arrow buttons enough times, they discovered the keyboard, and oriented themselves within the layout.	ICX	Needs Assistance
	It is not obvious that to change your vote, you have to deselect the chosen candidate to bring back the check boxes on the other candidates.	ICX	Problem Solving
Orientation and Navigation	In ballot contests, the keypad navigation wraps from bottom to top, but not from top to bottom. In dialogs, the navigation wraps both ways. This inconsistent behavior can be confusing, and results in inefficient operation.	ICX	Problem Solving

Function	Observation	System	Severity
	On contests that have a number of votes allowed, there must be the same number of write-in opportunities. When navigating by audio, each of these is announced as "Write-in" with no variation in speech. For those depending on this feedback, it is not clear that they are moving through different selections on the ballot. A voter recommended that it say "Write in #1, Write-in #2…" to clarify this.	ICX	Problem Solving
	One voter accidentally selected the ballot "Review" button rather than "Next," after making the first selection in a contest.	ICX	Problem Solving
	There are four ways to insert the card, only one of which works. For a blind voter, the activation card does not have an indication of the correct orientation. (Only the visual display provides instructions). Although all of our blind voters were able to feel the integrated circuit on the card, some instruction is needed on how to insert the card. One voter suggested a small Braille dot on the card as a cue.	ICX	Problem Solving
	At the top of the display at all times there are controls for text size, contrast, and language. For AT users to navigate to these controls, they must press "Select" while the contest title is active, then they can scan through the settings. Used in this way, the select button is inconsistent between selecting choices and navigation, which will be an issue for those with cognitive disabilities. Some blind voters were tripped up by this.	ICX	Problem Solving
Orientation and Navigation	Sighted voter felt that the instruction for the number of available votes (Vote for N) should be larger, and spaced down from the contest title.	ICX	Annoyances
	A sighted poll worker was surprised when the "Next" button changed to "Review." Suggested "End of Ballot" message.	ICX	Annoyances

Function	Observation	System	Severity
	While reviewing the ballot, the voter can jump back to individual contests and make changes. The review ballot button, to return to the review process always returns to the top of the ballot. On long ballots, with voters who make multiple changes, this is an unnecessary burden.	ICX	Annoyances
	If the voter is looking at the second contest on a single screen, making the text larger can cause that contest "disappear." It actually moves to the next page, but that isn't obvious.	ICX	Annoyances
	Poll worker (retired user interface designer) indicated that there should be more space between "Scroll down" and "Print" buttons on the review screen. He accidentally pressed it a few times.	ICX	Annoyances
	The Up/Down and Left/Right buttons on the tactile keypad perform the same navigation. Once voters discovered it, they used only one set of buttons.	ICX	Annoyances
	Several voters and candidates attempted to navigate by swiping, it is not enabled on this system.	ICX	Annoyances
	For voters using the dual switch input, on contests with many candidates, the "Next" button requires many, many button presses. It can cause voters to overshoot their target, and have to do it again.	ICX	Annoyances
	When text is enlarged, text size stays the same in alert messages in a different window.	ICX	Annoyances
Audio Instructions	Ballot header instructions are centered. When instructions are longer than a few words, the justification can chop up sentences strangely.	ICX	Annoyances
	Blind poll worker said "Oh!" In response to the content voice. Then said, "Oh, that's terrible!"	ICX	Problem Solving

Function	Observation	System	Severity
	The voice used for the audio feedback was described by voters as "crappy" and "rinky-dink." Truncates words at high speeds. The word "write-in" was rendered as "ret."	ICX	Problem Solving
	The rate range of the content voice (difference between slowest and fastest rate) was much higher than the instruction voice. When adjusting, the voter can only hear the instruction voice, so may require several tries to get the voice to a desired rate.	ICX	Problem Solving
	The audio instructions are repeated too quickly after pausing on a selection, and they are repeated too often after each navigation.	ICX	Problem Solving
	"The audio instructions are needlessly complicated."	ICX	Problem Solving
	"The [audio] instructions are kind of confusing."	ICX	Problem Solving
	Blind voters indicated that they wanted a verbosity control for the audio instructions. "Give me detailed instructions the first time, then shorter after that, but let me get full instructions again if I need them."	ICX	Problem Solving
	Several voters indicated that they wanted contextual help, not a repeat of the instructions for the tactile keypad when pressing "Help"	ICX	Annoyance
	After going through the instructions for the keypad, the voter asked, "How do I get out of here." It wasn't clear that pressing the "Select" button ended the instructions and moved back into the ballot.	ICX	Problem Solving
Audio Instructions	At the ballot header screen, the audio instructions do not say what to do to enter the contests. Voters repeatedly got stuck.	ICX	Problem Solving

Function	Observation	System	Severity
	The straight party button at the beginning of every contest confused all of the voters. The audio announces it as "Selected straight party candidate republican" and then immediately beings to give instructions on how to select the button.	ICX	Problem Solving
	The straight party button audio instructions are confusing to voters. The visual version is confusing as well. (See more in Alerts section below.)	ICX	Problem Solving
	When you override a straight party vote, the audio still announces the straight party button as "selected straight party" even though none are selected.	ICX	Problem Solving
	One blind voter was confused by the audio instructions. When the machine instructed her to press the "right" button, she interpreted this as the right-hand button, not the right arrow under her left hand.	ICX	Problem Solving
	When the blind voter hit the wrong button on the "Review Screen" button, and moved to the top of the contest, "I doesn't tell me that I didn't go to the review. It takes me back to the top."	ICX	Problem Solving
	All blind users reselect candidates selected by straight party choice. This could suggest that the cue that they are selected is not strong enough.	ICX	Problem Solving
	In the testing process, the voter was instructed to vote for the candidate that was endorsed by both parties. On first pass, this was missed because the pause between "Republican" and "Slash" made it sound as if only one party was involved.	ICX	Needs Assistance
	There are no audio or on-screen instructions for any of the other assistive devices (buttons, sip-and puff).	ICX	Needs Assistance

Function	Observation	System	Severity
Straight Party Voting	Once a voter chooses a straight party option, the system will not let them abstain from a partisan contest. It gives the voter an alert that says that even though the contest is blank, the candidates that match the straight party will be selected. (See more in the Alerts section below.)	ICX	Likely to prevent independent voting for voters with some disabilities
	Overriding a straight party vote deselects the straight party selections. In contests where the Vote for N number is greater than the straight party candidates, voters tried to select additional candidates, but had to reselect straight party candidates.	ICX	Problem Solving
	If you have overridden your straight party vote in any contest, the system will not allow you to cancel your straight party choice without de-selecting the out-of-party votes. All voters who tried to cancel their straight party had to ask how to do it.	ICX	Needs Assistance
	Voters complained that the system seemed to require a straight party vote. They thought it should have instructions indicating that if they do not want to vote straight party, they should select "Next."	ICX	Problem Solving
	Some voters thought that the straight party option selected the party's ballot, as in the primary. Poll workers independently reported the same concern, even they knew the function. Both groups said the instructions were unclear.	ICX	Annoyances
Alerts	The wording of the alerts is not good. Some language was too high level. One message uses the word "implicit."	ICX	Problem Solving

Function	Observation	System	Severity
Alerts	Alert: If left blank, this contest will have implicit choice selections for party [straight party choice] appeared in any contest where a voter made no candidate selection. Most voters and poll workers had no idea what this meant.	ICX	Problem Solving
	One poll worker said "This will get us sued. Voters will say that 'You changed my vote!'" in response to the "implicit" alert in a blank straight party contest.	ICX	Problem Solving
	Most alerts begin with "Warning" which voters and poll workers found too overbearing.	ICX	Problem Solving
	One blind vote indicated "I don't like 'warnings.' I would like to have information about how to proceed or correct an error."	ICX	Problem Solving
	The poll workers did not like "warnings." They preferred information about options to fix them.	ICX	Problem Solving
	When no selection is made in the straight party contest, the system generates a message "Warning, this contest is left blank!" Voters thought they had to make a selection.	ICX	Problem Solving
	The straight party cancel alert language and button labels are overly confusing. This is especially true in the audio instructions.	ICX	Problem Solving
	The straight party audio instructions are too wordy and complicated. It asks the voter to "select 'Confirm' to cancel or 'Cancel' to cancel."	ICX	Problem Solving
	Many voters thought that the undervoted contests warning implied that they were required to vote for the maximum number of candidates.	ICX	Problem Solving

Function	Observation	System	Severity
	On the review screen, a poll worker questioned the location of the message that "Your ballot is valid, but you have warnings." Rather than being located at the top of the screen, she suggested that it be placed between Scroll Down and Print. She said she almost missed it.	ICX	Problem Solving
	On the review screen, a poll worker thought it would be better if the alert icons could be touched for more information and options.	ICX	Problem Solving
Printing/Ballot Verification	After you press "Print" at the bottom of the screen, the alert window warns you that you are about to "Cast" your ballot. This action **does not** cast your ballot.	ICX	Likely to prevent independent voting for voters with some disabilities
	After you print your ballot, the machine displays a message "Thank you for voting! Your ballot is successfully cast." This action **does not** cast your ballot.	ICX	Likely to prevent independent voting for voters with some disabilities
	Poll workers reported that the "your ballot is cast" language will be a problem because voters might leave without putting their ballot in the scanner thinking it is their receipt.	ICX	Needs assistance
	Poll workers thought that the final screen should instruct voters to take their ballot and their voter card to the scanner.	ICX	Likely to prevent independent voting for voters with some disabilities
	The printed ballot reports undervoted contests as "UNDER_VOTE_BY_N" where N is the number of positions still available. The ballot review screen does not do this, which means it is not announced to visually impaired voters using the audio assistance	ICX	Likely to prevent independent voting for voters with some disabilities
	Printed ballot displays no straight party selection as being "Blank contest."	ICX	Problem Solving
	Alerts on printed ballot not informative and confusing. Poll workers thought that voters might think something is wrong since the ballot review screen said something different.	ICX	Problem Solving

Function	Observation	System	Severity
	One voter suggested printing arrows at the top of the ballot to match those on the scanner, indicating the correct alignment. Even when the scanner accepts the ballot in all orientations, this provides a hint that will reduce confusion.	ICX	Annoyances
	One poll worker suggested that the printed ballot should look more like the historical paper ballots.	ICX	Annoyances
Write-In Screen	Using the audio, when a typo is being corrected, the letter just deleted is not announced. This makes it difficult to impossible to know where you are in the process.	ICX	Problem solving
	Using the audio, when deleting characters to correct a misspelling, the audio feedback is "Delete" but does not announce the letter being deleted.	ICX	Likely to prevent independent voting for voters with some disabilities
	When the voter leaves the Write in screen, the audio instructions say "You have written in " and spells the name entered. However, it does not voice the space, so the voter may think that they failed to enter it. "It didn't tell me I had a space. I know I put one in." when writing in a candidate using the audio assistance.	ICX	Likely to prevent independent voting for voters with some disabilities
	No blind voter was able to complete the write-in process without some coaching to continue moving down the write-in page until they found the alphabet. Once they found the alphabet, they were able to proceed quickly.	ICX	Needs Assistance

Function	Observation	System	Severity
	When writing in a candidate using the audio, each letter typed is spoken. If the user pauses, the last audio information is repeated. If the letter is entered again, (for names with double letters), the spoken feedback sounds exactly the same as the repeated feedback from the last entry. There is a high risk of inadvertent doubles or single letters. Repeated feedback and new feedback should sound different.	ICX	Likely to prevent independent voting for voters with some disabilities
	No blind voter was able to complete the write-in process without some coaching to continue moving down the write-in page until they found the alphabet. Once they found the alphabet, they were able to proceed quickly.	ICX	Needs Assistance
Write-In Screen	In standard mode, once you have entered a write-in, you cannot correct it because touching it deselects it. Then when you go back into the write-in screen, it has removed the entry.	ICX	Problem Solving
	The page for write-in candidates doesn't actually provide instructions on how to do the write-in. This is true for standard mode and audio instructions. Audio voters must continue to press down or right to get beyond the text box and editing buttons to find the keyboard.	ICX	Problem Solving
	While using the audio, one blind voter suggested that she might use Help to figure out how to use the Write-In Screen. Help only repeats the instructions for the keypad, and does not provide contextual help as expected.	ICX	Problem Solving
	"It doesn't tell you how to do a write-in, does it? You would never know to press down again."	ICX	Problem Solving
	"OK, I guess I have to go all the way to the end," said one voter when trying to find the write-in screen keyboard in audio mode.	ICX	Problem Solving

Function	Observation	System	Severity
	When navigating the keyboard, the "period" key is announced as "dot." While this makes sense in some applications, names include periods, not dots.	ICX	Annoyances
	Poll Workers: Expected QWERTY layout for on-screen keyboard, but when saw that switch access scanned in order, saw the logic of the layout.	ICX	Annoyances
Assistive Devices	Poll workers felt that the keypad has too many buttons.	ICX	Annoyances
	The "Left/Right" and "Up/Down" buttons do exactly the same thing. Why are they both included?	ICX	Annoyances
Assistive Devices	There is no dedicated button on the tactile keypad to move to the next contest.	ICX	Annoyances
	The help button of the tactile keypad repeats the instructions for how to use the keypad. Blind voters suggested context help on the contests, indicating how to write in a candidate, how to select candidates, etc.	ICX	Annoyances
	The headphone and switch ports on the tactile keypad have no Braille markings, and are very difficult to see for sighted voters.	ICX	Annoyances
	If a voter chooses any assistive device, the touchscreen remains active, but each selection must be touched twice.	ICX	Annoyances
	When used for long ballots, the buttons tend to slide. A person who needs to use the paddle switches may not be able to effectively reposition them. They should be provided with small non-slip pads to hold them in place more strongly.	ICX	Annoyances
	The colors of the button switches (red and blue) were taken to indicate party affiliation. The buttons are provided with green and yellow caps as well, and non-partisan colors should be used.	ICX	Annoyances

Function	Observation	System	Severity
Scanner	The scanner provides no audio feedback to the blind voter.	ICP	Annoyances
	Scanner screen very hard to read at all, impossible from seated position	ICP	Annoyances
	Entry tray for ballots is very small – not long enough to support the entire ballot	ICP	Annoyances
Scanner	Memory cards for poll workers are very small – hard to handle – dexterity problems handling them. But at least not the teeny tiny ones (Compact Flash cards rather than SD cards)	ICP	Annoyances
	"All that [absentee] paperwork after the election [is gone]. Whoopee!" One poll worker said after realizing they could scan absentees instead of tallying them by hand.	ICP	Annoyances

Top positives

The expert examination, voter experiences, and poll worker sessions recognized several positives of these voting systems.

Independent voting

Generally, voters were able to complete their ballot on the ICX and ICP independently, once the facilitator/poll worker provided them with the appropriate accessibility features. No one found the system so difficult or frustrating that they were unable to vote, although several participants identified features that they felt would frustrate less competent voters.

Access features easily learned and helpful

As voters explored the access features, they seemed to learn them relatively easily. Most of the voters use similar assistive devices daily or when they vote.

After a very brief overview of each machine, the facilitator asked poll workers to demonstrate that they understood the function of each access feature by offering the appropriate option to the roll-play voter. Poll workers set up the machines successfully with minimal help – a reasonable outcome for an initial introduction to the system.

All four poll worker groups reported that the access features would help voters who already visit their location on Election Day. They also agreed that these features would likely assist other voters with disabilities that do not currently come to the polls on Election Day.

Default text size

The default text size was large enough for most of the participants. Once the voters discovered the settings button and options, they could easily change the font size. Only one voter required a larger font size to read the screen more easily.

Visual interface clean and intuitive

The examiners observed that the visual interface had aspects that would be intuitive to voters. Some voters echoed this as they experienced the machines, and others demonstrated the good design through use.

- **Selection behaviors.** As voters make selects, the screens behaved as expected for a modern touch interface.

  - **Candidate selection.** Selecting options within each contest was intuitive for voters. Touching the option once put a mark in the box for that candidate. Touching again removed the mark. Straight party votes were cleanly marked in each contest.

  - **Overvoting.** When voters have selected the maximum number of available candidates in a contest, the remaining candidates grey out. In this state, they are visible to the voter, but the voters are unable to select them. This behavior is not mirrored in the audio, though, and is a major problem for audio users. More discussion on this issue can be found in the problems section.

  - **Undervotes.** If voters have not selected the maximum number of allowed candidates in a contest, the candidates remain highlighted and available for selection. Visually, this becomes a noticeable pattern and voters quickly learn in which contests they could select additional candidates.

  - **Straight party.** If the voter selected a straight party option at the beginning of the ballot, the system placed a button just below the contest header and instructions in each partisan contest. This was an intuitive reminder to the voters that they had voted straight party.

- Furthermore, If the voter had selected a straight party option, the system did not grey out the remaining candidate names, but the matching straight party candidates had a check next to them. Voters who understood the straight party method seemed to understand

that they could make changes if necessary, but did not need to make additional selections.

- **Alerts structure.** While marking the ballot, if the voter left a contest blank or undervoted in a contest, for example, the system would alert the voter. The alerts were generally well placed and formatted in a way that makes sense to the voter. Also, if the voter wanted to change a straight party selection, the system alerted the voter in a new differently formatted tile. The same is true right before they printed the ballot.

  All this said, the text in the alerts is small and the wording used in the alerts *was not* good and will be discussed in the problems section below.

- **Review screen.** The review screen was formatted well and generally intuitive. For any contest that was blank or undervoted, the system provided an alert and the label "No selection made" for each of the available candidate spots. This made it easy for voters to recognize how many selections they could make.

Printed ballots verifiable and accessible

The ICX prints the ballot selections on an 8.5 x 11-inch piece of heavy weighted paper. The text is small but could be read by all the sighted voters. They all agreed that this satisfied verification for them.

Voters with low-vision, however would not be able to read the printed ballot without a magnifier or other assistive technology. The print on the ballot was much smaller than the on-screen tex.

Three of the blind voters were able to use a phone-based app that took a picture of the ballot and then read its contents back to them. Each of the voters who used this option were satisfied with this as the verification step.

Attachment C – Implementation Attestation

Implementation
attestation Dominio

pennsylvania
DEPARTMENT OF STATE

Voting System Implementation Attestation

System Name: _____

County: _____

Date Installed/Upgraded: _____

The below hardware/software was installed and verified on the system implemented:

System Component	Software or Firmware Version	Hardware Version	Model	Comments (Please specify the implementation details, single device /(desktop/laptop), Client/server/ as applicable
EMS Election Event Designer (EED)	5.5.12.1			
EMS Results Tally and Reporting (RTR)	5.5.12.1			
EMS Application Server	5.5.12.1			
EMS File System Service (FSS)	5.5.12.1			
EMS Audio Studio (AS)	5.5.12.1			
EMS Data Center Manager (DCM)	5.5.12.1			
EMS Election Data Translator (EDT)	5.5.12.1			
ImageCast Voter Activation (ICVA)	5.5.12.1			
EMS Adjudication	5.5.8.1			

EMS Adjudication Service	5.5.8.1			
Smart Card Helper Service	5.5.12.1			
ImageCast Precinct	5.5.3-0002			
ImageCast Central	5.5.3.0002			
ImageCast X	5.5.30			

Further to the key hardware/software components listed above, any of the COTS software and

ancillary components like switches, ballot boxes, charging carts sold on this contract are EAC

certified components of the Dominion Democracy Suite 5.5A electronic voting system. (Attach a

list of items sold on this contract.)

Dominion has validated that the systems have been installed and hardened following the EAC

certified system hardening instructions and no software other than the voting system software

has been installed on any of the components.

Vendor Representative Signature: _____

Vendor Representative Name:_____   **Title:**_____

Telephone:_____   **Email:**_____

County Representative Signature: _____

County Representative Name:_____   **Title:**_____

Attachment D – Minimum Training Requirements

Dominion must provide training and training materials as set forth below prior to the first use of the voting system in a primary or general election.

a) A demonstration of and training on the setup and operation of the Voting System to the purchasing county's board of elections' members and staff and the county's precinct election officials.

b) A training session on the Voting System's election management system and/or EPBs for the purchasing county's board of elections' members and no less than two and no more than six staff members chosen by the board of elections. The training sessions must afford the board members and its staff the opportunity to learn how to setup and program an election, and if applicable design and layout ballots independently of the Supplier's assistance and support.

c) A training session on the following subjects for the purchasing county's board of elections' members and no less than two and no more than six staff members chosen by the board of elections:

    i.   programming of all voting units and ancillary devices;

    ii.   tabulating results during the unofficial and official canvass;

    iii.   ensuring accuracy and integrity of results;

    iv.   preparing polling places and setting up the system for election day operation;

    v.   Training on accessibility options of the voting system

    vi.   Election day operating procedures;

    vii.   auditing procedures;

    viii.   conducting a recount;

    ix.   preserving records;

    x.   printing, designing, and formatting election reports;

    xi.   troubleshooting common issues;

    xii.   safeguarding and preventing tampering and unauthorized access to all parts of the Voting System; and

xiii.   Post-election care, maintenance and storage.

d) Any and all system manuals necessary to allow a purchasing county to operate the Voting System independently of the Supplier's assistance and support.

e) Training materials for a purchasing county board of elections to use when training its precinct election officials on how to setup, operate, and close down the Voting System on Election Day.

Attachment E – Source Code Escrow Obligations for Dominion

The Supplier must maintain an escrow agreement covering all source codes of the Voting System and/or EPB for a period of ten years from the date of delivery to and acceptance by a purchasing county board of elections. The Pennsylvania Secretary of the Commonwealth shall have the right to access the source codes in escrow subject to the conditions specified below in subsection (d). The Supplier must pay all costs associated with 1) placing the codes in escrow and 2) verifying that the Supplier has placed the codes in escrow (note: the escrow agent conducts this verification and charges a separate fee for this service).

a. Source code. Simultaneously with delivery of the Voting System and/or EPB software to purchasing Members, the Supplier shall deliver a true, accurate and complete copy of all source codes relating to the software to an escrow agent.

b. Escrow. To the extent that Voting System and/or EPB software and/or any perpetually-licensed software include application software or other materials generally licensed by the Supplier, Supplier agrees to place in escrow with an escrow agent copies of the most current version of the source code for the applicable software that is included as a part of the Services, including all updates, improvements, and enhancements thereof from time to time developed by Supplier.

c. Escrow agreement. An escrow agreement must be executed by the parties, with terms acceptable to the Commonwealth prior to deposit of any source code into escrow.

d. Obtaining source code. Supplier agrees that upon the occurrence of any event or circumstance which demonstrates with reasonable certainty the inability or unwillingness of Supplier to fulfill its obligations to Commonwealth under this Contract, Commonwealth shall be able to obtain the source code of the then-current source codes related to Voting Systems software, EPB software, and/or any Supplier Property placed in escrow from the escrow agent.

EXHIBIT 3

Approved, SCAO	Original - Court 1st copy - Defendant	2nd copy - Plaintiff 3rd copy - Return

STATE OF MICHIGAN JUDICIAL DISTRICT 3rd JUDICIAL CIRCUIT COUNTY PROBATE	**SUMMONS**	**CASE NO.**

Court address 1441 St Antoine, Detroit, MI 48226	**Court telephone no.** (313) 224-2501

Plaintiff's name(s), address(es), and telephone no(s). Cheryl A. Constatino, 20480 Williamsburg Ct., Harper Woods, MI 48225; Edward P. McCall, Jr., 40477 Delta Drive, Northville, MI 48168	**v**	Defendant's name(s), address(es), and telephone no(s). CITY OF DETROIT and DETROIT ELECTION COMMISSION, Coleman A. Young Municipal Center, 2 Woodward Ave., Detroit, MI 48226; JANICE M. WINFREY, Coleman A. Young Municipal Center, 2 Woodward Ave., Suite 200, Detroit, MI 48226; CATHY M. GARRETT, Coleman A. Young Municipal Center, 2 Woodward Ave., Suite 201, Detroit, MI 48226; WAYNE COUNTY BOARD OF CANVASSERS, Coleman A. Young Municipal Center, 2 Woodward Ave., Suite 502, Detroit, MI 48226
Plaintiff's attorney, bar no., address, and telephone no. David A. Kallman (P34200) / Stephen P. Kallman (P75622) Jack C. Jordan (P46551) / Erin E. Mersino (P70886) GREAT LAKES JUSTICE CENTER 5600 W. Mount Hope Hwy. Lansing, MI 48917 517-322-3207		

Instructions: Check the items below that apply to you and provide any required information. Submit this form to the court clerk along with your complaint and, if necessary, a case inventory addendum (form MC 21). The summons section will be completed by the court clerk.

Domestic Relations Case

☐ There are no pending or resolved cases within the jurisdiction of the family division of the circuit court involving the family or family members of the person(s) who are the subject of the complaint.

☐ There is one or more pending or resolved cases within the jurisdiction of the family division of the circuit court involving the family or family members of the person(s) who are the subject of the complaint. I have separately filed a completed confidential case inventory (form MC 21) listing those cases.

☐ It is unknown if there are pending or resolved cases within the jurisdiction of the family division of the circuit court involving the family or family members of the person(s) who are the subject of the complaint.

Civil Case

☐ This is a business case in which all or part of the action includes a business or commercial dispute under MCL 600.8035.

☐ MDHHS and a contracted health plan may have a right to recover expenses in this case. I certify that notice and a copy of the complaint will be provided to MDHHS and (if applicable) the contracted health plan in accordance with MCL 400.106(4).

☑ There is no other pending or resolved civil action arising out of the same transaction or occurrence as alleged in the complaint.

☐ A civil action between these parties or other parties arising out of the transaction or occurrence alleged in the complaint has

been previously filed in ☐ this court, ☐ _____ Court, where

it was given case number _____ and assigned to Judge _____ .

The action ☐ remains ☐ is no longer pending.

Summons section completed by court clerk.   **SUMMONS**

NOTICE TO THE DEFENDANT: In the name of the people of the State of Michigan you are notified:
1. You are being sued.
2. **YOU HAVE 21 DAYS** after receiving this summons and a copy of the complaint to **file a written answer with the court** and serve a copy on the other party **or take other lawful action with the court** (28 days if you were served by mail or you were served outside this state).
3. If you do not answer or take other action within the time allowed, judgment may be entered against you for the relief demanded in the complaint.
4. If you require special accommodations to use the court because of a disability or if you require a foreign language interpreter to help you fully participate in court proceedings, please contact the court immediately to make arrangements.

Issue date	Expiration date*	Court clerk

*This summons is invalid unless served on or before its expiration date. This document must be sealed by the seal of the court.

MC 01   (9/19)   SUMMONS   MCR 1.109(D), MCR 2.102(B), MCR 2.103, MCR 2.104, MCR 2.105

| PROOF OF SERVICE | SUMMONS
Case No. |

TO PROCESS SERVER: You are to serve the summons and complaint not later than 91 days from the date of filing or the date of expiration on the order for second summons. You must make and file your return with the court clerk. If you are unable to complete service you must return this original and all copies to the court clerk.

CERTIFICATE / AFFIDAVIT OF SERVICE / NONSERVICE

☐ OFFICER CERTIFICATE	OR	☐ AFFIDAVIT OF PROCESS SERVER
I certify that I am a sheriff, deputy sheriff, bailiff, appointed court officer, or attorney for a party (MCR 2.104[A][2]), and that: (notarization not required)		Being first duly sworn, I state that I am a legally competent adult, and I am not a party or an officer of a corporate party (MCR 2.103[A]), and that: (notarization required)

☐ I served personally a copy of the summons and complaint,
☐ I served by registered or certified mail (copy of return receipt attached) a copy of the summons and complaint,

together with _____
List all documents served with the summons and complaint

_____ on the defendant(s):

Defendant's name	Complete address(es) of service	Day, date, time

☐ I have personally attempted to serve the summons and complaint, together with any attachments, on the following defendant(s) and have been unable to complete service.

Defendant's name	Complete address(es) of service	Day, date, time

I declare under the penalties of perjury that this proof of service has been examined by me and that its contents are true to the best of my information, knowledge, and belief.

Service fee $	Miles traveled Fee $		Signature
Incorrect address fee $	Miles traveled Fee $	TOTAL FEE $	Name (type or print)
			Title

Subscribed and sworn to before me on _____ , _____ County, Michigan.
Date

My commission expires: _____   Signature: _____
Date   Deputy court clerk/Notary public

Notary public, State of Michigan, County of _____

ACKNOWLEDGMENT OF SERVICE

I acknowledge that I have received service of the summons and complaint, together with _____
Attachments

_____ on _____
Day, date, time

_____ on behalf of _____ .
Signature

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, Jr.,

               Plaintiff,

-vs-

CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,

               Defendants.

_____/

COMPLAINT AND APPLICATION FOR SPECIAL LEAVE TO FILE QUO WARRANTO COMPLAINT

EXPEDITED CONSIDERATION REQUESTED

FILE NO: 20-_____-AW

JUDGE

David A. Kallman	(P34200)
Erin E. Mersino	(P70886)
Jack C. Jordan	(P46551)
Stephen P. Kallman	(P75622)

GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

_____

There is no other pending or resolved civil action arising out of the same transaction or occurrence as alleged in the complaint.

1

<u>**APPLICATION FOR SPECIAL LEAVE TO FILE**</u>
<u>**QUO WARRANTO COMPLAINT**</u>

NOW COMES the above-named Plaintiffs, CHERYL A. COSTANTINO AND EDWARD P. MCCALL, JR., by and through their attorneys, GREAT LAKES JUSTICE CENTER, and for their application for leave to file a complaint for quo warranto relief, and for their complaint, hereby states as follows:

1.   Pursuant to MCL 600.4545(2), Plaintiffs respectfully request that this Honorable Court grant them special leave to file Counts II and III of this complaint for quo warranto for all the reasons as stated in their complaint, motion for temporary restraining order, supporting affidavits, exhibits, and accompanying brief, which are all incorporated herein by reference.

2.   Plaintiffs request this relief as recognized in *Shoemaker v City of Southgate*, 24 Mich App 676, 680 (1970).

WHEREFORE, Plaintiffs request that his application for special leave to file Counts II and III of this complaint for quo warranto relief be granted and that this Honorable Court grant such other and further relief as appropriate.

Dated: November 8, 2020.   */s/ David A. Kallman*
                                            David A. Kallman   (P34200)
                                            Attorney for Plaintiffs

<u>**COMPLAINT**</u>

NOW COMES the above-named Plaintiffs, CHERYL A. COSTANTINO AND EDWARD P. MCCALL, JR. (hereinafter "Plaintiff"), by and through their attorneys, GREAT LAKES JUSTICE CENTER, and for their Complaint hereby states as follows:

<u>**INTRODUCTION**</u>

1.   The election was held on November 3, 2020 and approximately 850,000 votes were

2

reported as cast in Wayne County, Michigan.

    2.   Plaintiff brings this action to raise numerous issues of fraud and misconduct that occurred in order to protect the rights of all voters in Michigan, especially Wayne County.

    3.   In summary, this Complaint raises numerous instances of fraud, including, but not limited to:

    a. Defendants systematically processed and counted ballots from voters whose name failed to appear in either the Qualified Voter File (QVF) or in the supplemental sheets. When a voter's name could not be found, the election worker assigned the ballot to a random name already in the QVF to a person who had not voted.

    b. Defendants instructed election workers to not verify signatures on absentee ballots, to backdate absentee ballots, and to process such ballots regardless of their validity.

    c. After election officials announced the last absentee ballots had been received, another batch of unsecured and unsealed ballots, without envelopes, arrived in trays at the TCF Center. There were tens of thousands of these absentee ballots, and apparently every ballot was counted and attributed only to Democratic candidates.

    d. Defendants instructed election workers to process ballots that appeared after the election deadline and to falsely report that those ballots had been received prior to November 3, 2020 deadline.

    e. Defendants systematically used false information to process ballots, such as using incorrect or false birthdays. Many times, the election workers inserted new names into the QVF after the election and recorded these new voters as having a birthdate of 1/1/1900.

    f. On a daily basis leading up to the election, City of Detroit election workers and

GREAT LAKES JUSTICE CENTER

3

employees coached voters to vote for Joe Biden and the Democrat party. These workers and employees encouraged voters to do a straight Democrat ballot. These election workers and employees went over to the voting booths with voters in order to watch them vote and coach them for whom to vote.

g. Unsecured ballots arrived at the TCF Center loading garage, not in sealed ballot boxes, without any chain of custody, and without envelopes.

h. Defendant election officials and workers refused to record challenges to their processes and removed challengers from the site if they politely voiced a challenge.

i. After poll challengers started discovering the fraud taking place at the TCF Center, Defendant election officials and workers locked credentialed challengers out of the counting room so they could not observe the process, during which time tens of thousands of ballots were processed.

j. Defendant election officials and workers allowed ballots to be duplicated by hand without allowing poll challengers to check if the duplication was accurate. In fact, election officials and workers repeatedly obstructed poll challengers from observing. Defendants permitted thousands of ballots to be filled out by hand and duplicated on site without oversight from poll challengers.

PARTIES, JURISDICTION, AND VENUE

4. Plaintiff Cheryl A. Costantino is a resident of Wayne County, voted in the November 3, 2020 election, and was a poll challenger.

5. Plaintiff Edward P. McCall, Jr. is a resident of Wayne County, voted in the November 3, 2020 election, and was a poll challenger.

6. Defendant City of Detroit is a municipality located in Wayne County tasked with

the obligation to hold all elections in a fair and legal manner.

7.   Defendant Election Commission is a department of the City of Detroit.

8.   Janice M. Winfrey, in her official capacity, is Clerk of the Defendant City of Detroit and the Chairman of the Defendant Detroit City Election Commission and is the city official who oversees and supervises all elections in the City of Detroit.

9.   Cathy M. Garrett, in her official capacity, is the Clerk of Defendant Wayne County, and is the county official who oversees and supervises all elections in Wayne County.

10.   Defendant Wayne County Board of Canvassers is the appointed body that is responsible for canvassing the votes cast within the county they serve. The Board members certify elections for all local, countywide and district offices which are contained entirely within the county they serve.

11.   This action is properly filed in Wayne County Circuit Court pursuant to MCR 3.306(A)(2), Mich. Const. art. 2, sec. 4, par. 1(h), MCL 600.4545, and MCL 600.605. Venue is proper pursuant to MCR 3.306(D).

<div align="center">

GENERAL ALLEGATIONS

</div>

12.   Wayne County used the TCF Center in downtown Detroit to consolidate, collect, and tabulate all of the ballots for the County.

13.   The TCF Center was the only facility within Wayne County authorized to count the ballots.

<div align="center">

Forging Ballots on the Qualified Voter List

</div>

14.   An attorney and former Michigan Assistant Attorney General was a certified poll challenger at the TCF Center (Exhibit A – Affidavit of Zachary Larsen).

15.   As Mr. Larsen watched the process, he was concerned that ballots were being

processed without confirmation that the voter was an eligible voter in the poll book because of information he had received from other poll challengers (Exhibit A).

16.   Mr. Larsen reviewed the running list of scanned in ballots in the computer system, where it appeared that the voter had already been counted as having voted. An official operating the computer then appeared to assign this ballot to a different voter as he observed a completely different name that was added to the list of voters at the bottom of a running tab of processed ballots on the right side of the screen (Exhibit A).

17.   Mr. Larsen was concerned that this practice of assigning names and numbers indicated that a ballot was being counted for a non-eligible voter who was not in either the poll book or the supplemental poll book. From his observation of the computer screen, the voters were not in the official poll book. Moreover, this appeared to be the case for the majority of the voters whose ballots he personally observed being scanned (Exhibit A).

18.   Because of Mr. Larsen's concern, he stepped behind the table and walked over to a spot behind where the first official was conducting her work. Understanding health concerns due to COVID-19, he attempted to stand as far away from this official as he reasonably could while also being able to visually observe the names on the supplemental poll book and on the envelopes (Exhibit A).

19.   As soon as Mr. Larsen moved to a location where he could observe the process by which the first official at this table was confirming the eligibility of the voters to vote, the first official immediately stopped working and glared at him. He stood still until she began to loudly and aggressively tell him that he could not stand where he was standing. She indicated that he needed to remain in front of the computer screen where he could not see what the worker was doing (Exhibit A).

20.   Both officials then began to tell Mr. Larsen that because of COVID, he needed to be six feet away from the table. He responded that he could not see and read the supplemental poll book from six feet away, and that he was attempting to keep his distance to the extent possible (Exhibit A).

21.   Just minutes before at another table, a supervisor had explained that the rules allowed Mr. Larsen to visually observe what he needed to see and then step back away. Likewise, on Election Day, he had been allowed to stand at equivalent distance from poll books in Lansing and East Lansing precincts without any problem. With this understanding, he remained in a position to observe the supplemental poll book (Exhibit A).

22.   Both officials indicated that Mr. Larsen could not remain in a position that would allow him to observe their activities; the officials indicated they were going to get their supervisor (Exhibit A).

23.   When the supervisor arrived, she reiterated that Mr. Larsen was not allowed to stand behind the official with the supplemental poll book, and he needed to stand in front of the computer screen. Mr. Larsen told her that was not true, and that he was statutorily allowed to observe the process, including the poll book (Exhibit A).

24.   The supervisor then pivoted to arguing that Mr. Larsen was not six feet away from the first official. Mr. Larsen told her that he was attempting to remain as far away as he could while still being able to read the names on the poll book (Exhibit A).

25.   The supervisor then stood next to the chair immediately to the left of the first official and indicated that Mr. Larsen was "not six feet away from" the supervisor and that she intended to sit in the chair next to the official with the poll book, so he would need to leave (Exhibit A).

7

26.   This supervisor had not been at the table at any time during the process, and she had responsibility for numerous ACVBs. Further, the supervisor's choice of chairs was approximately three feet to the left of the first official and therefore in violation of the six-foot distance rule (Exhibit A).

27.   Accordingly, Mr. Larsen understood that this was a ruse to keep him away from a place where he could observe the confirmation of names in the supplemental poll book. The supervisor began to repeatedly tell him that he "needed to leave" so he responded that he would go speak with someone else and fill out a challenge form (Exhibit A).

28.   After Mr. Larsen observed and uncovered the fraud that was taking place and had the confrontation with the supervisor, he left the counting room to consult with another attorney about the matter around 1:30 p.m. to 2:00 p.m. (Exhibit A).

29.   It was at this point that election officials stopped permitting any further poll challengers to enter the counting room, including Mr. Larsen (Exhibit A).

30.   Election officials never allowed Mr. Larsen to re-enter the counting room to fulfill his duties as a poll challenger after he had discovered the fraud which was taking place.

Illegal Voter Coaching and Identification Issues

31.   An election employee with the City of Detroit was working at a polling location for approximately three weeks prior to the election. This City of Detroit employee directly observed, on a daily basis, other City of Detroit election workers and employees coaching voters to vote for Joe Biden and the Democrat party. This employee witnessed these workers and employees encouraging voters to do a straight Democrat ballot and witnessed these election workers and employees going over to the voting booths with voters in order to watch them vote and coach them for whom to vote (Exhibit B – Affidavit of Jessy Jacob).

8

32.   During the last two weeks while this same employee was working at the polling location, she was specifically instructed by her supervisor never to ask for a driver's license or any photo I.D. when a person was trying to vote (Exhibit B).

Changing Dates on Ballots

33.   All absentee ballots that existed were required to be inputted into the QVF system by 9:00 p.m. on November 3, 2020. This was required to be done in order to have a final list of absentee voters who returned their ballots prior to 8:00 p.m. on November 3, 2020. In order to have enough time to process the absentee ballots, all polling locations were instructed to collect the absentee ballots from the drop-box once every hour on November 3, 2020 (Exhibit B).

34.   On November 4, 2020, a City of Detroit election worker was instructed to improperly pre-date the absentee ballots receive date that were not in the QVF as if they had been received on or before November 3, 2020. She was told to alter the information in the QVF to falsely show that the absentee ballots had been received in time to be valid. She estimates that this was done to thousands of ballots (Exhibit B).

Illegal Double Voting

35.   The election employee observed a large number of people who came to the satellite location to vote in-person, but they had already applied for an absentee ballot. These people were allowed to vote in-person and were not required to return the mailed absentee ballot or sign an affidavit that the voter lost the mailed absentee ballot (Exhibit B).

36.   This would permit a person to vote in person and also send in his/her absentee ballot.

37.   Prior to the election, the Michigan Secretary of State sent ballot applications to deceased residents and to non-residents of the State of Michigan.

GREAT LAKES JUSTICE CENTER

9

First Round of New Ballots

38.   At approximately 4:00 a.m. on November 4, 2020, tens of thousands of ballots were suddenly brought into the counting room through the back door (Exhibit C – Affidavit of Andrew Sitto).

39.   These new ballots were brought to the TCF Center by vehicles with out-of-state license plates (Exhibit C).

40.   It was observed that all of these new ballots were cast for Joe Biden (Exhibit C).

Second Round of New Ballots

41.   The ballot counters were required to check every ballot to confirm that the name on the ballot matched the name on the electronic poll list; this was the list of all persons who had registered to vote on or before November 1, 2020 and is often referred to as the QVF (Exhibit D - Affidavit of Bob Cushman)

42.   The ballot counters were also provided with Supplemental Sheets which had the names of all persons who had registered to vote on either November 2, 2020 or November 3, 2020 (Exhibit C).

43.   The validation process for a ballot requires the name on the ballot to be matched with a registered voter on either the QVF or the Supplemental Sheets.

44.   At approximately 9:00 p.m. on Wednesday, November 4, 2020, numerous boxes of ballots were brought to TCF Center (Exhibit D).

45.   Upon information and belief, the Wayne County Clerk's office instructed the ballot counters to use the date of birth of January 1, 1900 on all of these newly appearing ballots.

46.   None of the names of these new ballots corresponded with any registered voter on

10

the QVF or the Supplemental Sheets (Exhibit D).

47.   Despite election rules that required that all absentee ballots be inputted into the QVF system before 9:00 p.m. on November 3, 2020 (Exhibit B), the election workers inputted all of these new ballots into the QVF and manually added each voter to the list after 9:00 p.m. (Exhibit D).

48.   Upon information and belief, the vast majority of these new ballots indicated the voter's date of birth as January 1, 1900 entered into the QVF (Exhibit D).

49.   These newly received ballots were either fraudulent or apparently cast by persons who were not registered to vote prior to the polls closing at 8:00 p.m. on November 3, 2020.

No Transparency - Denied Access

50.   Numerous election challengers were denied access to observe the counting process by the Defendants.

51.   After denying access to the counting rooms, election officials used large pieces of cardboard to block the windows to the counting room thereby preventing anyone from watching the ballot counting process (Exhibit C).

Qualified Voter File Access

52.   Whenever an absentee vote application or in-person absentee voter registration was finished, election workers were instructed to input the voter's name, address, and date of birth into the QVF system (Exhibit B).

53.   The QVF system can be accessed and edited by any election processor with proper credentials in the State of Michigan at any time and from any location with internet access (Exhibit B).

54.   This access permits anyone with the proper credentials to edit when ballots were

11

sent, received, and processed from any location with internet access (Exhibit B).

55.   Many of the counting computers within the counting room had icons that indicated that they were connected to the internet (Exhibit F – Affidavit of Patrick J. Colbeck).

Absentee Ballot Signatures

56.   Whenever a person requested an absentee ballot either by mail or in-person, that person was required to sign the absentee voter application.

57.   When the voter returned his/her absentee ballot to be counted, the voter was required to sign the outside of the envelope that contained the ballot.

58.   Election officials who process absentee ballots are required to compare the signature on the absentee ballot application with the signature on the absentee ballot envelope.

59.   Election officials at the TCF Center instructed workers to never validate or compare the signatures on absentee applications and the absentee envelopes to ensure their authenticity and validity (Exhibit B).

Unsecured Ballots

60.   A poll challenger witnessed tens of thousands of ballots being delivered to the TCF Center that were not in any approved, sealed, or tamper-proof container (Exhibit E – Affidavit of Daniel Gustafson).

61.   Large quantities of ballots were delivered to the TCF Center in what appeared to be mail bins with open tops (Exhibit E).

62.   Contrary to law, these ballot bins and containers did not have lids, were not sealed, and did not have the capability of having a metal seal (Exhibit E).

COUNT I – CONSTITUTIONAL RIGHT TO ACCURACY AND INTEGRITY OF ELECTIONS
MICHIGAN CONSTITUTION – ARTICLE 2, SECTION 4, PARAGRAPH 1(H)

63.   Paragraphs 1 through 62 are hereby incorporated by reference as if fully restated

12

herein.

64.   Plaintiff brings this action to vindicate his constitutional right to a free and fair election ensuring the accuracy and integrity of the process pursuant to the Michigan Constitution, art. 2, sec. 4, par. 1(h), which states all Michigan citizens have:

> The right to have the results of statewide elections audited, in such a manner as prescribed by law, to ensure the accuracy and integrity of elections.

65.   The Mich. Const., art. 2, sec. 4, further states, "All rights set forth in this subsection shall be self-executing. This subsection shall be liberally construed in favor of voters' rights in order to effectuate its purposes."

66.   Based upon all the allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to enjoin the certification of the election results pending a full investigation and court hearing, and to order an independent audit of the November 3, 2020 election to ensure the accuracy and integrity of the election.

COUNT II – STATUTORY QUO WARRANTO CLAIM – ELECTION FRAUD
MCL 600.4545(2); MCL 168.861

67.   Paragraphs 1 through 66 are hereby incorporated by reference as if fully restated herein.

68.   MCL 600.4545(2) permits an action to request the issuance of a writ of quo warranto if the action is brought within 30 days after the election upon the request of "any citizen of the county by special leave of the court or a judge thereof."

69.   The statute also requires this action to "be brought against the municipality wherein such fraud or error is alleged to have been committed."

70.   Quo Warranto may be brought to remedy fraudulent or illegal voting or tampering with ballots or ballot boxes before a recount pursuant to MCL 168.861, which states,

13

> For fraudulent or illegal voting, or tampering with the ballots or ballot boxes before a recount by the board of county canvassers, the remedy by quo warranto shall remain in full force, together with any other remedies now existing.

71.   Based upon the allegations contained herein, material fraud or error occurred in this election so that the outcome of the election was affected.

72.   Based upon the above allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to issue a writ of quo warranto and order appropriate relief, including, but not limited to, enjoining the certification of the election results pending a full investigation and court hearing, ordering a recount of the election results, or voiding the election and ordering a new election, to remedy the fraud.

COUNT III – COMMON LAW QUO WARRANTO CLAIM – ELECTION FRAUD

73.   Paragraphs 1 through 72 are hereby incorporated by reference as if fully restated herein.

74.   MCR 3.306(B)(2) permits an action to request the issuance of a writ of quo warranto.

75.   An application to proceed by quo warranto must disclose sufficient facts and grounds and sufficient apparent merit to justify further inquiry.

76.   Quo warranto is warranted whenever it appears that material fraud or error has been committed at any election. This type of action is brought to challenge the validity of the election itself. *Barrow v Detroit Mayor*, 290 Mich App 530, 543 (2010). For all the reasons stated herein and in the attached affidavits, material fraud or error was committed during the election.

77.   This Quo Warranto claim is brought to remedy fraudulent or illegal voting or tampering with ballots or ballot boxes.

78.   Based upon the allegations contained herein, material fraud or error occurred in this

election so that the outcome of the election was affected.

79.   Based upon the above allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to issue a writ of quo warranto and order appropriate relief, including, but not limited to, enjoining the certification of the election results pending a full investigation and court hearing, ordering a recount of the election results, or voiding the election and ordering a new election, to remedy the fraud.

<div align="center">

COUNT IV – EQUAL PROTECTION VIOLATION
Mich Const, art I, § 2.

</div>

80.   Paragraphs 1 through 79 are hereby incorporated by reference as if fully restated herein.

81.   The Equal Protection Clause of the Michigan Constitution provides that "[n]o person shall be denied the equal protection of the laws; nor shall any person be denied the enjoyment of his civil or political rights." Mich Const, art I, § 2.

82.   The right to vote is a fundamental civil right and a political right.

83.   The Equal Protection Clause forbids election officials granting the right to vote on equal terms but later devaluing a person's vote through failing to use specific standards and uniform rules.

84.   Only specific standards and uniform rules provide sufficient guarantees of equal treatment.

85.   Every person has the right to vote, with their vote counted as one vote, and not have his or her vote diluted and voided out by the counting of an illegal vote.

86.   Defendants handling of the election, as described above and as described in the attached affidavits, establish how rampant and systemic fraud devalued and diluted Plaintiff's civil and political rights.

87.   The illegal procedures, illegal standards, and illegal treatment of the ballots and the counting of ballots in Wayne County and in Detroit employed by Defendants unconstitutionally burden the fundamental right to vote.

88.   Defendants have no legitimate interest in counting illegal and improper ballots, counting ballots more than once, illegally correcting and improperly duplicating ballots, adding false birthdates and voter information to ballots, and improperly handling the collection and counting of ballots in a way that dilutes and cancels out rightfully and properly cast votes.

89.   Based upon the above allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to order appropriate relief, including, but not limited to, enjoining the certification of the election results pending a full investigation and court hearing, ordering a recount of the election results, or voiding the election and ordering a new election, to remedy the fraud.

COUNT V – STATUTORY ELECTION LAW VIOLATIONS

90.   Paragraphs 1 through 89 are hereby incorporated by reference as if fully restated herein.

Violation of MCL 168.765a.

91.   Absent voter ballots must only be counted when "at all times" there is "at least 1 election inspector from each major political party." MCL 168.765a.

92.   Per eyewitness accounts described in this Complaint and its attached sworn affidavits, Defendants habitually and systematically disallowed election inspectors from the Republican party, including Plaintiff, to be present in the voter counting place and refused access to election inspectors from the Republican party, including Plaintiff, to be within a close enough distance from the absent voter ballots to be able to see for whom the ballots were

16

cast.

93.   Defendants refused entry to official election inspectors from the Republican party, including Plaintiff, into the counting place to observe the counting of absentee voter ballots.   Defendants even physically blocked and obstructed election inspectors from the Republican party, including Plaintiff, by adhering large pieces of cardboard to the transparent glass doors so the counting of absent voter ballots was not viewable.

Violation of MCL 168.733

94.   MCL 168.733 requires:

(1) The board of election inspectors shall provide space for the challengers within the polling place that enables the challengers to observe the election procedure and each person applying to vote. A challenger may do 1 or more of the following:

(a) Under the scrutiny of an election inspector, inspect without handling the poll books as ballots are issued to electors and the electors' names being entered in the poll book.

(b) Observe the manner in which the duties of the election inspectors are being performed.

(c) Challenge the voting rights of a person who the challenger has good reason to believe is not a registered elector.

(d) Challenge an election procedure that is not being properly performed.

(e) Bring to an election inspector's attention any of the following:

(i) Improper handling of a ballot by an elector or election inspector.

(ii) A violation of a regulation made by the board of election inspectors pursuant to section 742.

(iii) Campaigning being performed by an election inspector or other person in violation of section 744.

(iv) A violation of election law or other prescribed election procedure.

(f) Remain during the canvass of votes and until the statement of returns is duly signed and made.

(g) Examine without handling each ballot as it is being counted.

(h) Keep records of votes cast and other election procedures as the challenger desires.

17

(i) Observe the recording of absent voter ballots on voting machines.

95.   Per eyewitness accounts described in this Complaint and its attached sworn affidavits, Defendants habitually and systematically failed to provide space for election inspectors from the Republican party, including Plaintiff, to observe election procedure, failed to allow the inspection of poll books, failed to share the names of the electors being entered in the poll books, failed to allow the examination of each ballot as it was being counted, and failed to keep records of obvious and observed fraud.

96.   Poll challengers, including Plaintiff, observed election workers and supervisors writing on ballots themselves to alter them, apparently manipulating spoiled ballots by hand and then counting the ballots as valid, counting the same ballot more than once, adding information to incomplete affidavits accompanying absentee ballots, counting absentee ballots returned late, counting unvalidated and unreliable ballots, and counting the ballots of "voters" who had no recorded birthdates and were not registered in the State's Qualified Voter File or on any Supplemental voter lists.

97.   Michigan law requires that in order to register as an absentee voter, the application must be made in writing and received by the clerk by 5pm on the Friday before the election.

Violation of MCL 168.765(5)

98.   Michigan election law, MCL 168.765(5), requires Defendants to post the following absentee voting information anytime an election is conducted which involves a state or federal office:

> a.   The clerk must post before 8:00 a.m. on Election Day: 1) the number of absent voter ballots distributed to absent voters 2) the number of absent voter ballots returned before Election Day and 3) the number of absent voter ballots delivered for processing.

18

b.   The clerk must post before 9:00 p.m. on Election Day: 1) the number of absent voter ballots returned on Election Day 2) the number of absent voter ballots returned on Election Day which were delivered for processing 3) the total number of absent voter ballots returned both before and on Election Day and 4) the total number of absent voter ballots returned both before and on Election Day which were delivered for processing.

c.   The clerk must post immediately after all precinct returns are complete: 1) the total number of absent voter ballots returned by voters and 2) the total number of absent voter ballots received for processing.

99.   Upon information and belief, Defendants failed to post by 8:00 a.m. on Election Day the number of absentee ballots distributed to absent voters and failed to post before 9:00 p.m. the number of absent voters returned before on Election Day.

100.   Per Michigan Election law, all absentee voter ballots must be returned to the clerk before polls close at 8pm. MCL 168.764a. Any absentee voter ballots received by the clerk after the close of the polls on election day will not be counted.

101.   Michigan allows for early counting of absentee votes prior to the closings of the polls for large jurisdictions, such as the City of Detroit and Wayne County.

102.   Upon information and belief, receiving tens of thousands additional absentee ballots in the early morning hours after election day and after the counting of the absentee ballots had concluded, without proper oversight, with tens of thousands of ballots attributed to just one candidate, Joe Biden, indicates Defendants failed to follow proper election protocol.

103.   Based upon the above allegations of fraud, statutory violations, and other misconduct, as stated herein and in the attached affidavits, it is necessary to order appropriate relief, including, but not limited to, enjoining the certification of the election results pending a full investigation and court hearing, ordering a recount of the election results, or voiding the election and ordering a new election, to remedy the fraud.

WHEREFORE, Plaintiff respectfully requests that this Honorable Court:

A. issue an order requiring Defendants to conduct an independent and non-partisan audit to determine the accuracy and integrity of the November 3, 2020 election;

B. issue an *ex-parte* TRO prohibiting Defendants' from certifying the election results or continuing to count ballots until this matter can be heard by the Court.

C. issue an preliminary injunction prohibiting Defendants' from certifying the election results until this matter can be heard by the Court.

D. issue an order voiding the November 3, 2020 election results and order a new election to be held.

E. Issue a protective order as requested in the attached Motion for TRO.

F. grant such other and further relief as is equitable and just, and grant him costs, expenses and attorney fees incurred in having to bring this action.

GREAT LAKES JUSTICE CENTER

I HEREBY STATE AND AFFIRM THAT I HAVE HAD READ THE FOREGOING COMPLAINT AND THAT IT IS TRUE AND ACCURATE TO THE BEST OF MY INFORMATION, KNOWLEDGE, AND BELIEF.

Dated: November 8, 2020.

_____
Cheryl A. Constantino, Plaintiff

Dated: November 8, 2020.

Edward P. McCall
_____
Edward P. McCall, Plaintiff

Prepared By:

/s/ David A. Kallman
_____

David A. Kallman	(P34200)
Stephen P. Kallman	(P75622)
Jack C. Jordan	(P46551)
Erin E. Mersino	(P70886)
Attorneys for Plaintiff	

Great Lakes Justice Center

21

I HEREBY STATE AND AFFIRM THAT I HAVE HAD READ THE FOREGOING COMPLAINT AND THAT IT IS TRUE AND ACCURATE TO THE BEST OF MY INFORMATION, KNOWLEDGE, AND BELIEF.

Dated: November 8, 2020.

Cheryl A. Costantino, Plaintiff

Dated: November 8, 2020.

Edward P. McCall, Plaintiff

Prepared By:

/s/ David A. Kallman

David A. Kallman	(P34200)
Stephen P. Kallman	(P75622)
Jack C. Jordan	(P46551)
Erin E. Mersino	(P70886)
Attorneys for Plaintiff	

21

EXHIBIT A

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, JR.,	**AFFIDAVIT OF ZACHARY LARSEN**
Plaintiff,	
	FILE NO: 20-_____-AW
-vs-	
	JUDGE
CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,	
Defendants.	

_____/

David A. Kallman	(P34200)
Erin E. Mersino	(P70886)
Jack C. Jordan	(P46551)
Stephen P. Kallman	(P75622)

GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

_____

AFFIDAVIT

The Affiant, Zachary Larsen, being first duly sworn, hereby deposes and states as follows:

1.   My name is Zachary Larsen, I am over the age of eighteen, have personal knowledge of the facts stated in this Affidavit and, if sworn as a witness, I am competent to testify to these facts.

1

2.   I am an attorney in private practice and licensed in the State of Michigan. Prior to my entry into private practice, I served as an Assistant Attorney General for eight years from January 2012 through January 2020, where I was recognized with an award for the quality of my work and served the state on several high-priority litigation matters.

3.   In September 2020, I volunteered to serve as a poll challenger for the Michigan Republic Party's election day operations to ensure the integrity of the vote and conformity of the election process to the election laws of Michigan.

4.   In preparation for my service, I attended an elections training, reviewed materials relating to the conduct of elections, and read pertinent sections of Michigan's election law.

5.   On Election Day, Tuesday, November 3, 2020, I served as a roving attorney and credentialed poll challenger with a group of attorneys and visited approximately 20-30 voting precincts in Lansing, East Lansing, and Williamston, Michigan to confirm that the election was conducted in accordance with law, and on a few occasions, to address complaints raised by specific voters.

6.   During my visits to precincts on Election Day, I was allowed to visually inspect the poll book without touching it at every precinct where we asked to review it. In each instance, I was allowed to stand a respectful distance behind the election officials while remaining close enough to read relevant names and numbers.

7.   The following day, on Wednesday, November 4, 2020, I arrived at the former Cobo Center, now known as the TCF Center, in Detroit, Michigan to serve as a poll challenger for the absent voter count occurring in Detroit and arrived between 9:30 and 9:45 a.m.

2

8.   Prior to my admission to the floor where the absent voter count was occurring, I received credentials from the Michigan Republican Party and further instruction regarding the process for handling ballots at absent voter counting boards ("AVCBs").

9.   Thereafter, I received a temperature scan from election officials that confirmed I did not have an elevated temperature. I arrived inside, and I was "checked in" by an election official who reviewed my driver's license and confirmed my credentials and eligibility to serve as a challenger. I was admitted at approximately 10:30 a.m.

10.   When I arrived at a counting table and began to observe the process, I noticed immediately that part of the process that was being implemented did not conform to what I had been told in my training and the materials that I had received.

11.   Specifically, the information I had received described the process that was supposed to be occurring at the tables as follows.

12.   A first election official would scan a ballot. If the scan did not confirm a voter in the poll book, that official would then check the voter against a paper copy "supplemental poll book."

13.   The official would then read the ballot number to a second election official and hand the ballot to that official, who would remove the ballot (while still in the secrecy sleeve) and confirm the ballot number. That second official would then hand the ballot (in the secrecy sleeve) to a third official who would tear the stub off of the ballot, and place the stub in a ballot stub envelope, then pass the remaining ballot to a fourth official.

14.   The fourth official would then remove the ballot from the secrecy sleeve, flatten the ballot to ensure it was capable of processing, and visually inspect for rips, tears, or stains before placing the ballot in the "ballots to be tabulated box." However, if that fourth official identified a

3

concern, she would place the ballot back in its envelope and into a "problem ballots" box that required additional attention to determine whether they would be processed and counted. A copy of a diagram that I had received on this process is attached as Exhibit A to this affidavit.

15.   What I observed immediately was that the secrecy of the ballot was not being respected.

16.   Instead, the second official at the table where I was observing was repeatedly placing her fingers into the secrecy sleeve to separate the envelope and visually peek into the envelopes in a way that would allow her to visually observe the ballot and identify some of the votes cast by the voter.

17.   Sometimes, the third official whose job was merely to remove the stub from the ballot would likewise remove the ballot from the secrecy sleeve or otherwise peek to observe the ballot. Sometimes a ballot would be removed completely from the secrecy sleeve and then placed back inside and passed along this process.

18.   I conferred regarding this issue with another challenger at a nearby table, and he indicated he had observed similar irregularities regarding the use of the secrecy sleeves.

19.   When that challenger raised the issue with a supervisor, and he was immediately asked "why does it matter?" and "what difference does it make?"

20.   Beyond the legal requirements for maintaining ballot secrecy, both of us were concerned that the violations of the secrecy of the ballot that we witnessed could be or were being used to manipulate which ballots were placed in the "problem ballots" box.

21.   Later that morning, at another table, a challenger identified concerns that ballots were being placed into "problem ballots" boxes purportedly based on the reason that the voter had failed to place the ballot in the secrecy sleeve, while other ballots at the same table were being

passed along and placed into the "ballots to be tabulated" box that also did not have secrecy sleeves.

22.   I personally observed that several ballots were placed into the "problem ballots" boxed and marked with a sticky note indicating that they were "problem ballots" merely because of the lack of a secrecy sleeve.

23.   When I spoke with a supervisor regarding this issue, he explained that these ballots were being placed in the "problem ballots" box for efficiency.

24.   From my experience at the first table I had visited (addressed in Paragraphs 15 through 17 above), I had also witnessed ballots that were placed into the "ballots to be tabulated" box that had arrived without a secrecy sleeve. So the differentiation among these ballots despite both ballots arriving in secrecy sleeves was perplexing and again raised concerns that some ballots were being marked as "problem ballots" based on who the person had voted for rather than on any legitimate concern about the ability to count and process the ballot appropriately.

25.   Just before noon, I arrived at another table (which I later contemporaneously noted as AVCB # 23), and I conferred with the Republican challenger who had been observing the process from a viewing screen and watching the response of the computer system as ballots were scanned by the first official.

26.   I asked the challenger if she had observed anything of concern, and she immediately noted that she had seen many ballots scanned that did not register in the poll book but that were nonetheless processed. Because she needed to leave for lunch, I agreed to watch her table.

27.   As I watched the process, I was sensitive to her concern that ballots were being processed without confirmation that the voter was an eligible voter in the poll book, so I stood at the monitor and watched.

GREAT LAKES JUSTICE CENTER

28.   The first ballot scanned came in as a match to an eligible voter. But the next several ballots that were scanned did not match any eligible voter in the poll book.

29.   When the scan came up empty, the first official would type in the name "Pope" that brought up a voter by that last name.

30.   I reviewed the running list of scanned in ballots in the computer system, and it appeared that the voter had already been counted as having voted. Then the first official appeared to assign a number to a different voter as I observed a completely different name that was added to the list of voters at the bottom of a running tab of processed ballots on the right side of the screen.

31.   That same official would then make a handwritten notation on her "supplemental poll book," which was a hard copy list that she had in front of her at the table.

32.   The supplemental poll book appeared to be a relatively small list.

33.   I was concerned that this practice of assigning names and numbers indicated that a ballot was being counted for a non-eligible voter who was not in either the poll book or the supplemental poll book. From my observation of the computer screen, the voters were certainly not in the official poll book. Moreover, this appeared to be the case for the majority of the voters whose ballots I had personally observed being scanned.

34.   Because of this concern, I stepped behind the table and walked over to a spot behind where the first official was conducting her work.

35.   Understanding health concerns due to COVID-19, I attempted to stand as far away from this official as I reasonably could while also being able to visually observe the names on the supplemental poll book and on the envelopes.

6

36.   Partly inhibiting my ability to keep a distance, the tables were situated so that two counting tables were likely a maximum of eight feet apart. In other words, you could not stand more than four feet behind one without being less than four feet from another.

37.   As soon as I moved to a location where I could observe the process by which the first official at this table was confirming the eligibility of the voters to vote, the first official immediately stopped working and glared at me. I stood still until she began to loudly and aggressively tell me that I could not stand where I was standing. She indicated that I needed to remain in front of the computer screen.

38.   I responded, "Ma'am, I am allowed by statute to observe the process." As I did, a Democratic challenger ran towards me and approached within two feet of me, saying "You cannot speak to her! You are not allowed to talk to her." I responded, "Sir, she spoke to me. I was just answering her."

39.   The first official again told me that the only place I was allowed to observe from was at the computer screen. A second official at the table reiterated this. I said that was not true.

40.   Both officials then began to tell me that because of COVID, I needed to be six feet away from the table. I responded that I could not see and read the supplemental poll book from six feet away, but I was attempting to keep my distance to the extent possible.

41.   Just minutes before at another table, a supervisor had explained that the rules allowed me to visually observe what I needed to see and then step back away. Likewise, on Election Day, I had been allowed to stand at equivalent distance from poll books in Lansing and East Lansing precincts without any problem. With this understanding, I remained in a position where I would be able to observe the supplemental poll book until I could do so for the voter whose ballots had just been scanned and did not register in the poll book.

7

42.   Both officials indicated that I could not remain in a position that would allow me to observe their activities and they were going to get their supervisor.

43.   This seemed particularly concerning because the Democratic challenger who raised concerns over my verbal response to the official had been positioned behind the second official (the one who confirms ballots as described in Paragraph 13) no further away than I was from the first official at that time and had not been stationed at the computer screen as the officials repeatedly told me was the only place that I could stay.

44.   When the supervisor arrived, she reiterated that I was not allowed to stand behind the official with the supplemental poll book, and I needed to stand in front of the computer screen. I told her that was not true, and that I was statutorily allowed to observe the process, including the poll book.

45.   The supervisor then pivoted to arguing that I was not six feet away from the first official. I told her I was attempting to remain as far away as I could while still being able to read the names on the poll book.

46.   In an attempt to address her concerns, I took a further step away from the table and indicated I would try to keep my distance, and that I thought I was about six feet away from the first official. The supervisor then stood next to the chair immediately to the left of the first official and indicated that I was "not six feet away from" the supervisor and that she intended to sit in the chair next to the official with the poll book, so I would need to leave.

47.   This supervisor had not been at the table at any time during the process, and she had responsibility for numerous ACVBs. Further, the supervisor's choice of chairs was approximately three feet to the left of the first official and therefore in violation of the six-foot distance rule.

48.   Accordingly, I understood that this was a ruse to keep me away from a place where I could observe the confirmation of names in the supplemental poll book. The supervisor began to repeatedly tell me that I "needed to leave" so I responded that I would go speak with someone else or fill out a challenge form.

49.   I went to find another attorney serving as a challenger and returned to discuss the matter further with the supervisor. When I returned, she reiterated her assertions and insisted that there was nowhere where I could stand in conformity with the six-foot rule that would allow me to observe the supplemental poll book. Ultimately, to avoid further conflict with the supervisor, I agreed that I would leave that counting table and move to another table.

50.   Between 1:30 p.m. and 2 p.m., my colleague and I decided to return to the suite that housed the Republican challengers to get lunch. We left the counting floor and went up to the Republicans second-floor suite.

51.   About 30 to 45 minutes later, an announcement was made that challengers needed to return to the floor. As we attempted to return, we were made aware that the officials admitting people had limited the number of election challengers to another 52 people who would be allowed inside. I displayed my credentials and walked up to near the door where a small crowd was gathering to be let in.

52.   Shortly thereafter, a man came out to announce that no one would be let in (despite the prior announcement) because the room had reached the maximum number of challengers. As he was asked why we would not be let in, he explained that the maximum number of challengers were determined from the number of names on the sign-in sheet, regardless of how many people had left the room.
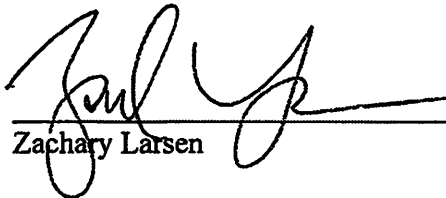
9

53.   Many Republican challengers had left the room for lunch without signing out, including myself and my colleague. Accordingly, we were being arbitrarily "counted" towards this capacity limitation without actually being allowed into the room to observe.

54.   When challengers raised this issue with the man at the door, he refused to discuss any solutions such as confirming the identify of challengers who had been previously admitted.

55.   To the best of my recollection, I was never informed that if I left the room and failed to sign out that I would be refused admission or that there would be no means of confirming that I had been previously admitted.

56.   The above information is true to the best of my information, knowledge, and belief.

57.   Further affiant says not.

Zachary Larsen

On this 8th day of November, 2020, before me personally appeared Zachary Larsen, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by his subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and belief, and as to those matters he believes them to be true.

Stephen P. Kallman
Notary Public, Eaton County, Michigan
My Commission Expires: 11/26/2025

10

EXHIBIT B

<div style="text-align:center; writing-mode: vertical">

</div>

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, JR.,	**AFFIDAVIT OF JESSY JACOB**
Plaintiff,	**FILE NO: 20-_____-AW**
-vs-	**JUDGE**
CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,	
Defendants.	

David A. Kallman   (P34200)
Erin E. Mersino   (P70886)
Jack C. Jordan   (P46551)
Stephen P. Kallman   (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

AFFIDAVIT

The Affiant, Jessy Jacob, being first duly sworn, hereby deposes and states as follows:

1.   My name is Jessy Jacob. I am an adult citizen and resident of the State of Michigan.

2.   I have been an employee for the City of Detroit for decades.

3.   I was assigned to work in the Elections Department for the 2020 election.

4.   I received training from the City of Detroit and the State of Michigan regarding the election process.

1

GREAT LAKES JUSTICE CENTER

5. I worked at the election headquarters for most of September and I started working at a satellite location for most of October, 2020.

6. I processed absentee ballot packages to be sent to voters while I worked at the election headquarters in September 2020 along with 70-80 other poll workers. I was instructed by my supervisor to adjust the mailing date of these absentee ballot packages to be dated earlier than they were actually sent. The supervisor was making announcements for all workers to engage in this practice.

7. At the satellite location, I processed voter registrations and issued absentee ballots for people to vote in person at the location.

8. I directly observed, on a daily basis, City of Detroit election workers and employees coaching and trying to coach voters to vote for Joe Biden and the Democrat party. I witnessed these workers and employees encouraging voters to do a straight Democrat ballot. I witnessed these election workers and employees going over to the voting booths with voters in order to watch them vote and coach them for whom to vote.

9. During the last two weeks while working at this satellite location, I was specifically instructed by my supervisor not to ask for a driver's license or any photo I.D. when a person was trying to vote.

10. I observed a large number of people who came to the satellite location to vote in-person, but they had already applied for an absentee ballot. These people were allowed to vote in-person and were not required to return the mailed absentee ballot or sign an affidavit that the voter lost the mailed absentee ballot.

11. Whenever I processed an absentee voter application or in-person registration, I was instructed to input the person's name, address, and date of birth into the Qualified Voter File (QVF) system.

12. The QVF system can be accessed and edited by any election processor with proper credentials in the State of Michigan at any time and from any location with internet access.

13. I worked at the satellite location until the polls closed on November 3, 2020 at 8:00 p.m. and properly completed the entry of all absentee ballots into the QVF by 8:30 p.m.
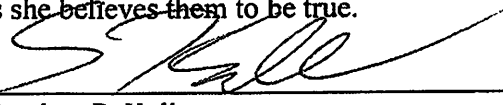
2

14. I then reported to work at the TCF Center on November 4, 2020, at 8:30 a.m. to process ballots. I was instructed not to validate any ballots and not to look for any deficiencies in the ballots.

15. Absentee ballots that were received in the mail would have the voter's signature on the envelope. While I was at the TCF Center, I was instructed not to look at any of the signatures on the absentee ballots, and I was instructed not to compare the signature on the absentee ballot with the signature on file.

16. All absentee ballots that existed were required to be inputted into the QVF system by 9:00 p.m. on November 3, 2020. This was required to be done in order to have a final list of absentee voters who returned their ballots prior to 8:00 p.m. on November 3, 2020. In order to have enough time to process the absentee ballots, all satellites were instructed to collect the absentee ballots from the drop-box once every hour on November 3, 2020.

17. On November 4, 2020, I was instructed to improperly pre-date the absentee ballots receive date that were not in the QVF as if they had been received on or before November 3, 2020. I was told to alter the information in the QVF to falsely show that the absentee ballots had been received in time to be valid. I estimate that this was done to thousands of ballots.

18. The above information is true to the best of my information, knowledge, and belief.

19. Further affiant says not.

_____
Jessy Jacob

On this 7th day of November, 2020, before me personally appeared Jessy Jacob, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that she has read the foregoing affidavit by her subscribed and knows the contents thereof, and that the same is true of her own knowledge and belief, except as to those matters she states to be on information and belief, and as to those matters she believes them to be true.

_____
Stephen P. Kallman
Notary Public, Eaton County, Michigan
My Commission Expires: 11/26/2025

GREAT LAKES JUSTICE CENTER

3

EXHIBIT C

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, Jr.,
 	
                         Plaintiff,
 	
-vs-
 	
CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,
 	
                         Defendants.
	AFFIDAVIT OF ANDREW SITTO
	
	FILE NO: 20-_____-AW
	
	JUDGE

_____/

David A. Kallman   (P34200)
Erin E. Mersino   (P70886)
Jack C. Jordan   (P46551)
Stephen P. Kallman   (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

_____

AFFIDAVIT

The Affiant, Andrew Sitto, being first duly sworn, hereby deposes and states as follows:
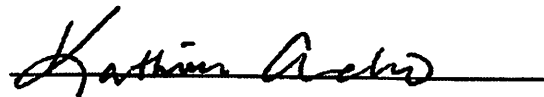
1.   My name is Andrew Sitto and I was a poll challenger for the November 3, 2020 election.

2.   I arrived at the TCF Center at 9:30 p.m. on November 3, 2020.

3.   I reported to the counting room, which is a large room on the main floor of the TCF Center. The room is about 100 yards long and about 50 yards wide with windows.

1

4. The poll challengers watch the counters who were sitting at tables comparing paper ballots to Michigan electronic poll book or registered voter list (sometimes called the QVF) on computer screens. Each counter compares the ballot to an electronic database on his/her computer to determine if the ballot correlates to a person who is registered to vote.

5. I was standing in the center of the room where there were replacement or duplicate ballots for damaged ballots. I remained in this location from about 10:00 p.m. until about 4:30 a.m. If a counter needed a duplicate ballot, they would come to this central location to take a duplicate ballot.

6. At approximately 4:30 a.m., I thought everyone was going to go home as our shift had ended.

7. There were two men in charge of the counting, one in his 30s and one in his 50s.

8. At approximately 4:30 a.m., on November 4, 2020, the man in his 50s got on the microphone and stated that another shipment of absentee ballots would be arriving and would have to be counted.

9. I heard other challengers say that several vehicles with out-of-state license plates pulled up to the TCF Center a little before 4:30 a.m. and unloaded boxes of ballots.

10. At approximately 4:30 a.m., tens of thousands of ballots were brought in and placed on eight long tables. Unlike the other ballots, these boxes were brought in from the rear of the room.

11. The same procedure was performed on the ballots that arrived at approximately 4:30 a.m., but I specifically noticed that every ballot I observed was cast for Joe Biden.

12. While counting these new ballots, I heard counters say at least five or six times that all five or six ballots were for Joe Biden. All ballots sampled that I heard and observed were for Joe Biden.

13. There was a shift change at 5:00 a.m. for the poll challengers. Many challengers decided to leave at the 5:00 a.m. shift change. I decided not to leave and continued to monitor the ballot counting.

14. Upon information and belief, the TCF Center was the only place where absentee ballots were being counted.

2

14. Upon information and belief, the TCF Center was the only place where absentee ballots were being counted.

15. I filled out about six or seven incident reports about what occurred at the TCF Center.

16. At approximately 2:00 p.m. on November 4, 2020, election officials covered windows to the counting room with cardboard to block the view.

17. A little after 2:00 p.m., I exited the glass enclosed room to take a break in the lobby area of the TCF Center. When I tried to go back into the counting room, security guards refused to allow me back in to monitor the counting

18. Previously, people could come and go freely into the counting room.

19. The above information is true to the best of my information, knowledge, and belief.

20. Further affiant says not.

_____
Andrew Sitto

On this 7th day of November, 2020, before me personally appeared Andrew Sitto, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by him subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and belief, and as to those matters he believes them to be true.

_____
Notary   Public,   Macomb   County,
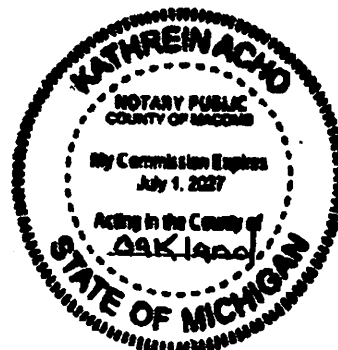
Michigan

My Commission Expires: 7/1/2027

3

EXHIBIT D

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, JR.,	**AFFIDAVIT OF ROBERT CUSHMAN**
Plaintiff,	
-vs-	
CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,	FILE NO: 20-_____-AW
JUDGE
Defendants.	

_____/

David A. Kallman   (P34200)
Erin E. Mersino   (P70886)
Jack C. Jordan   (P46551)
Stephen P. Kallman   (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

_____

AFFIDAVIT

The Affiant, Robert Cushman, being first duly sworn, hereby deposes and states as follows:

1.   My name is Robert Cushman. I am an adult citizen and resident of the State of Michigan.

2.   I served and was trained to be a poll challenger for the November 2020 election in Detroit, Michigan.

1

3.   During my observations of the normal processing of ballots on November 4th between about 7:45 a.m. and 8:30 a.m. I was substantially obstructed from performing my challenger duties of observing and making notes at Board Number 31. The persons involved either directly or indirectly involved: 1. A worker named Joe, 2. A supervisor named Miss Browner, 3. an unknown person with no credentials, 4. a Democratic Challenger with credentials and one of the AVCB leaders named David Nathan.

4.   On Wednesday, November 4, 2020, Detroit election officials told us that they were going to process military ballots last. I did my best to try to observe the processing/duplication of the military ballots.

5.   On November 4, 2020, I was surprised to see numerous new boxes of ballots arrive at the TCF Center in the evening. I first noticed these boxes in the distribution area after many of the military ballots had been distributed and processed. I estimate these boxes contained several thousand new ballots when they appeared.

6.   The main list of persons who had registered to vote on or before November 1, 2020, was listed on an electronic poll book, often referred to as the QVF. As I understand it, the Supplemental Sheets were the lists of persons who had registered to vote on November 2, 2020 or November 3, 2020.

7.   I observed that none of the names on these new ballots were on the QVF or the Supplemental Sheets.

8.   I saw the computer operators at several counting boards manually adding the names and addresses of these thousands of ballots to the QVF system.

9.   When I asked what the possible justification was to counting ballots from unknown, unverified "persons," I was told by election supervisors that the Wayne County Clerk's Office had "checked them out."

10.   I challenged not one ballet, but the entire process as the names were not in the QVF or Supplemental Sheets and because the DOB's were all wrong, all being marked as 01-01-1900.

11.   An Election Supervisor near board number #86 advised me to go to the podium of election officials and ask one of them to help me. I did, and I enlisted the help of one of the leaders, a young man named Anthony Miller.

12.   Mr. Miller walked me back to board number #86 and asked what I wanted the challenge to say. I said that I did not want to challenge just one ballot, but the entire process, as I was witnessing several thousand ballots inputted illegally.

13.   Mr. Miller advised the computer operator what to type in as a challenge so that it was part of the Official Record in the Poll Book for Board Number #86.

14.   I challenged the authority and the authenticity of all of these ballots that were being processed late with absolutely no accompanying documentation, no corresponding name in the QVF, and no corresponding name in the Supplemental List.

15.   Every ballot was being fraudulently and manually entered into the Electronic Poll Book (QVF), as having been born on January 1, 1900. This "last" batch of ballots was processed in the 8:00 p.m. to 10:00 p.m. time frame.

16.   When I asked about this impossibility of each ballot having the same birthday occurring in 1900, I was told that was the instruction that came down from the Wayne County Clerk's office.

17.   Mr. Miller was very clear about these late ballots and that the instructions were coming from the Wayne County Clerk's office.

18.   I was surprised and disappointed at the preponderance of dishonesty, irregularities, and fraudulent tactics at the November 3, 2020 election at the TCF Center.

19.   The above information is true to the best of my information, knowledge, and belief.

20.   Further affiant says not.

Robert F Cushman
Robert Cushman

On this 7th day of November, 2020, before me personally appeared Robert Cushman, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by him subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and belief, and as to those matters he believes them to be true.

Stephen P. Kallman
Stephen P. Kallman
Notary Public, Eaton County, Michigan
My Commission Expires: 11/26/2025

3

EXHIBIT E

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, JR.,	**AFFIDAVIT OF DANIEL GUSTAFSON**
Plaintiff,	
-vs-	
CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,	**FILE NO: 20-_____-AW** **JUDGE**
Defendants.	

_____/

David A. Kallman   (P34200)
Erin E. Mersino   (P70886)
Jack C. Jordan   (P46551)
Stephen P. Kallman   (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

AFFIDAVIT

The Affiant, Daniel Gustafson, being first duly sworn, hereby deposes and states as follows:

1.   My name is Daniel Gustafson. I am an adult citizen and resident of the State of Michigan.

2.   I served and was trained to be a poll challenger for the November 3, 2020 election.

1

4. Large quantities of ballots were delivered to the TCF Center in what appeared to be mail bins with open tops.

5. These ballot bins and containers did not have lids, were not sealed, and did not have the capability of having a metal seal.

6. The ballot bins were not marked or identified in any way to indicate their source of origin.

7. The above information is true to the best of my information, knowledge, and belief.

8. Further affiant says not.

Daniel Gustafson

On this 8th day of November, 2020, before me personally appeared Daniel Gustafson, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by him subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and belief, and as to those matters he believes them to be true.

Stephen P. Kallman
Notary Public, Eaton County, Michigan
My Commission Expires: 11/26/2025

GREAT LAKES JUSTICE CENTER

2

EXHIBIT F

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

CHERYL A. COSTANTINO and EDWARD P. McCALL, JR.,
 	
                          Plaintiff,
 	
-vs-
 	
CITY OF DETROIT; DETROIT ELECTION COMMISSION; JANICE M. WINFREY, in her official capacity as the CLERK OF THE CITY OF DETROIT and the Chairperson of the DETROIT ELECTION COMMISSION; CATHY M. GARRETT, in her official capacity as the CLERK OF WAYNE COUNTY; and the WAYNE COUNTY BOARD OF CANVASSERS,
 	
                         Defendants.
	AFFIDAVIT OF PATRICK J. COLBECK
	
	FILE NO: 20-_____-AW
	
	JUDGE

_____/

David A. Kallman   (P34200)
Erin E. Mersino   (P70886)
Jack C. Jordan   (P46551)
Stephen P. Kallman   (P75622)
GREAT LAKES JUSTICE CENTER
Attorneys for Plaintiff
5600 W. Mount Hope Hwy.
Lansing, MI 48917
(517) 322-3207/Fax: (517) 322-3208

AFFIDAVIT

The Affiant, Robert Cushman, being first duly sworn, hereby deposes and states as follows:

1.   My name is Patrick J. Colbeck, I was a poll challenger for the November 3, 2020 election, and I am a resident of Wayne County.

2.   At approximately 5:30pm on November 3, 2020, I asked Daniel Baxter if Tabulation Computers were connected to internet. Mr. Baxter said simply "No."

1

3.   At approximately 5:45pm on November 3, 2020, I first asked Chris Thomas how the tabulated results were to be transferred to the County and other parties. He said he didn't know, but he would find out. I repeated this inquiry throughout the evening until Mr. Thomas responded that he would not be able to release that information until the end of the next day. Early during the morning, I was able to look at a copy of the Detroit Election manual which specified that the tabulated votes would be copied from the adjudicator computers to a series of flash drives.

4.   At approximately 7:30pm on November 3, 2020, about 50% of Poll Workers left the AV Counting Board before 8pm in violation of MCL 168.792a(11). An announcement was made by Detroit Election Officials at 7:45pm calling them back but most had already left the AV Counting Board area.

5.   At approximately 11pm on November 3, 2020, I asked David Nathan if any of the computers were connected to the internet. He said "No." When I asked for confirmation, he said "Trust me." I stated that he may have been misled. When I pressed for a demonstration, he repeated "Trust me." All it takes to confirm the connectivity status of a Windows computer is to roll the cursor over the LAN connection icon in the bottom right corner of the display. When there is no internet connection, a unique icon showing a cross-hatched globe appears. I proceeded to review the terminal screens for the Tabulator and Adjudicator computers and I observed the icon that indicates internet connection on each terminal. Other poll challengers can attest to this observation as required (e.g. Kristina Karamos and Randy Bishop).
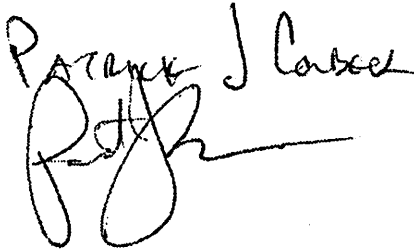
6.   Sometime during the evening I proceeded to examine the physical cabling connections between all of the computers in the facility. The results of this observation are captured in the attached network topology diagram. The IT technician stationed on the stage actively discouraged any close-up observation of the network. Phone usage ban discouraged taking photographs of equipment. There were no observed ethernet connections for Electronic Poll Books at AV Counting Boards, but Wi-Fi Routers were present with attached active Wi-Fi networks in area including one called "AV_Connect" and a separate one for "CPSStaff" which were both of sufficient signal strength to be accessed outside of the Counting Board as well as inside. I did not confirm presence of internet connection for Electronic Poll Books but the "security incident" at 10am on 11/3 would seem to indicate that they were connected to internet via Wi-Fi.

7.   Further affiant says not.

_____

Patrick J. Colbeck

2

On this 8th day of November, 2020, before me personally appeared Patrick J. Colbeck, who in my presence did execute the foregoing affidavit, and who, being duly sworn, deposes and states that he has read the foregoing affidavit by him subscribed and knows the contents thereof, and that the same is true of his own knowledge and belief, except as to those matters he states to be on information and belief, and as to those matters he believes them to be true.

Notary Public, _Oakland_ County, Michigan
My Commission Expires: _Aug 4, 2025_

BARBARA A. HARRELL
NOTARY PUBLIC, STATE OF MI
COUNTY OF OAKLAND
MY COMMISSION EXPIRES Aug 4, 2025
ACTING IN COUNTY OF Wayne

GREAT LAKES JUSTICE CENTER

3

EXHIBIT G

If this opinion indicates that it is "FOR PUBLICATION," it is subject to revision until final publication in the Michigan Appeals Reports.

STATE OF MICHIGAN

COURT OF APPEALS

PROMOTE THE VOTE,

        Plaintiff-Appellant,

V

SECRETARY OF STATE,

        Defendant-Appellee,

and

HOUSE OF REPRESENTATIVES and SENATE,

        Intervening Appellees.

FOR PUBLICATION
July 20, 2020
9:00 a.m.

No. 353977
Court of Claims
LC No. 20-000002-MZ

PRIORITIES USA and RISE, INC.,

        Plaintiffs-Appellants,

V

SECRETARY OF STATE

        Defendant-Appellee,

and

SENATE and HOUSE OF REPRESENTATIVES,

        Intervening Defendants-Appellees.

No. 354096
Court of Claims
LC No. 19-000191-MZ

Before: METER, P.J., and RONAYNE KRAUSE and GADOLA, JJ.

METER, P.J.

-1-

In Docket No. 353977, plaintiff, Promote the Vote (PTV), appeals by right a June 24, 2020 order entered by the Court of Claims. In Docket No. 354096, plaintiffs, Priorities USA and Rise, Inc. (collectively, the Priorities USA plaintiffs), also appeal by right the June 24, 2020 order. The Court of Claims order denied PTV's motion for summary disposition, as well as the Priorities USA plaintiffs' motion for a preliminary injunction, and granted the motions for summary disposition of the Secretary of State (Secretary) and the Senate and House of Representatives (collectively, the Legislature). This Court consolidated the two cases and ordered that the appeals would be decided without oral arguments. *Promote the Vote v Secretary of State*, unpublished order of the Court of Appeals, entered July 8, 2020 (Docket Nos. 353977, 354096).

Priorities USA is a "voter-centric progressive advocacy and service organization," which spends resources, including in the state of Michigan, to register young individuals to vote. Rise, Inc., is a "nonprofit organization that runs statewide advocacy and voter mobilization programs" in Michigan and California, as well as on a number of campuses throughout the country. Part of its mission is to increase voting access for college students. PTV is "a ballot question committee" that drafted the language of Proposal 3, a 2018 ballot proposal to amend Michigan's Constitution, collected more than 400,000 signatures in order to get the proposal placed on the ballot, and led the campaign for the proposal's passage.

On appeal, PTV and the Priorities USA plaintiffs argue that the proof of residency requirements in MCL 168.497(2)-(4), the challenged ballot procedure in MCL 168.497(5), and the Secretary's automatic voter registration policy unduly burden the rights in 1963 Const, art 2, § (4)(1), and are therefore unconstitutional. PTV and the Priorities USA plaintiffs also argue that MCL 168.497 violates the Equal Protection Clause of the Michigan Constitution. For the reasons discussed below, we affirm.

I. LEGAL BACKGROUND

In the 2018 general election, Michigan voters approved Proposal 3, which made changes to Michigan's election law. Specifically, Proposal 3 amended 1963 Const, art 2, § 4. The article now provides:

> (1) Every citizen of the United States who is an elector qualified to vote in Michigan shall have the following rights:

> (a) The right, once registered, to vote a secret ballot in all elections.

> * * *

> (d) The right to be automatically registered to vote as a result of conducting business with the secretary of state regarding a driver's license or personal identification card, unless the person declines such registration.

> (e) The right to register to vote for an election by mailing a completed voter registration application on or before the fifteenth (15th) day before that election to an election official authorized to receive voter registration applications.

(f) The right to register to vote for an election by (1) appearing in person and submitting a completed voter registration application on or before the fifteenth (15th) day before that election to an election official authorized to receive voter registration applications, or (2) beginning on the fourteenth (14th) day before that election and continuing through the day of that election, appearing in person, submitting a completed voter registration application and providing proof of residency to an election official responsible for maintaining custody of the registration file where the person resides, or their deputies.[1] Persons registered in accordance with subsection (1)(f) shall be immediately eligible to receive a regular or absent voter ballot.

<center>* * *</center>

All rights set forth in this subsection shall be self-executing. This subsection shall be liberally construed in favor of voters' rights in order to effectuate its purposes. Nothing contained in this subsection shall prevent the legislature from expanding voters' rights beyond what is provided herein. This subsection and any portion hereof shall be severable. If any portion of this subsection is held invalid or unenforceable as to any person or circumstances, that invalidity or unenforceability shall not affect the validity, enforceability, or application of any other portion of this subsection.

(2) Except as otherwise provided in this constitution or in the constitution or laws of the United States[,] the legislature shall enact laws to regulate the time, place and manner of all nominations and elections, to preserve the purity of elections, to preserve the secrecy of the ballot, to guard against abuses of the elective franchise, and to provide for a system of voter registration and absentee voting. No law shall be enacted which permits a candidate in any partisan primary or partisan election to have a ballot designation except when required for identification of candidates for the same office who have the same or similar surnames.[2]

---

[1] We will refer to the period "beginning on the fourteenth (14th) day before that election and continuing through the day of that election" as the "14-day period."

[2] Before the passage of Proposal 3, 1963 Const, art 2, § 4 consisted of one paragraph, which was very similar to the current paragraph in § 4(2). It provided:

> The legislature shall enact laws to regulate the time, place and manner of all nominations and elections, except as otherwise provided in this constitution or in the constitution and laws of the United States. The legislation shall enact laws to preserve the purity of elections, to preserve the secrecy of the ballot, to guard against abuses of the elective franchise, and to provide for a system of voter registration and absentee voting. No law shall be enacted which permits a candidate in any partisan primary or partisan election to have a ballot designation except when

<center>-3-</center>

Following the 2018 general election, the Legislature enacted 2018 PA 603, which amended MCL 168.497. The first five provisions of MCL 168.497 now provide:

> (1) An individual who is not registered to vote but possesses the qualifications of an elector as provided in [MCL 168.492] may apply for registration to the clerk of the county, township, or city in which he or she resides in person, during the clerk's regular business hours, or by mail or online until the fifteenth day before an election.

> (2) An individual who is not registered to vote but possesses the qualifications of an elector as provided in [MCL 168.492] or an individual who is not registered to vote in the city or township in which he or she is registering to vote may apply for registration in person at the city or township clerk's office of the city or township in which he or she resides from the fourteenth day before an election and continuing through the day of the election. An individual who applies to register to vote under this subsection must provide to the city or township clerk proof of residency in that city or township. For purposes of this subsection, proof of residency includes, subject to subsection (3), any of the following:

> (a) An operator's or chauffeur's license issued under the Michigan vehicle code, 1949 PA 300, MCL 257.1 to 257.923, or an enhanced driver license issued under the enhanced driver license and enhanced official state personal identification act, 2008 PA 23, MCL 28.301 to 28.308.

> (b) An official state personal identification card issued under 1972 PA 222, MCL 28.291 to 28.300, or an enhanced official state personal identification card issued under the enhanced driver license and enhanced official state personal identification card act, 2008 PA 23, MCL 28.301 to 28.308.[3]

> (3) If an application for voter registration under subsection (2) does not have proof of residency as that term is defined in subsection (2), the applicant may provide as his or her proof of residency any other form of identification for election

---

required for identification of candidates for the same offense which have the same or similar surnames.

[3] A person registering to vote in the 14-day period does not provide proof of residency simply by presenting a Michigan driver's license or personal identification card. Because the individual "must provide to the city or township clerk proof of residency in that city or township," the Michigan driver's license or personal identification card must include an address located in either the city or township. Both the Priorities USA plaintiffs and the Secretary read MCL 168.497(2) in the same manner. We will refer to a Michigan's driver's license or personal identification card that can establish proof of residency under MCL 168.497(2) as a "current Michigan driver's license or personal identification card."

purposes as that term is defined in [MCL 168.2] and 1 of the following documents that contains the applicant's name and current residence address:

(a) A current utility bill.

(b) A current bank statement.

(c) A current paycheck, government check, or other government document.

(4) If an application for voter registration under subsection (2) does not have identification for election purposes, the applicant may register to vote if he or she signs an affidavit indicating that the applicant does not have identification for election purposes and the applicant provides 1 of the following documents that contains the applicant's name and current residence address:

(a) A current utility bill.

(b) A current bank statement.

(c) A current paycheck, government check, or other government document.

(5) Immediately after approving a voter registration application, the city or township clerk shall provide to the individual registering to vote a voter registration receipt that is in a form as approved by the secretary of state. If an individual registers to vote in person 14 days or less before an election or registers to vote on election day, and that applicant registers to vote under subsection (3) or (4), the ballot of that elector must be prepared as a challenged ballot as provided in [MCL 168.727] and must be counted as any other ballot is counted unless determined by a court of law under [MCL 168.747 or MCL 168.748] or any other applicable law.

MCL 168.2(k) defines "identification for election purposes" as the following: "[a]n operator's or chauffeur's license issued under the Michigan vehicle code . . . or an enhanced driver license issued under the enhanced driver license and enhanced official state personal identification card act"; "[a]n official state personal identification card . . . or an enhanced official state personal identification card issued under the enhanced driver license and enhanced official state personal identification card act"; a current operator's or chauffeur's license issued by another state; a current state personal identification card issued by another state; a current state government issued photo identification card; a current United States passport or federal government issued photo identification card; a current military photo identification card; a current tribal photo identification card; or "[a] current student photo identification card issued by a high school in this state, an institution of higher education in this state described in section 4, 5, or 6 of article VIII of the state constitution of 1963, a junior college or community college established under section 7 of article VIII of the state constitution of 1963, or another accredited degree[-] or certificate[-]granting college or university, junior college, or community college located in this state."

An election inspector must identify, as provided in MCL 168.745 and MCL 168.746, a challenged ballot. MCL 168.727(2)(a).[4] Under MCL 168.745, the election inspectors "shall cause to be plainly endorsed on said ballot, with pencil, before depositing the same in the ballot box, the number corresponding to the number placed after such voter's name on the poll lists without opening the same[.]" To prevent the identification of challenged ballots, the election inspectors "shall cause to be securely attached to said ballot, with mucilage or other adhesive substance, a slip or piece of blank paper of the same color and appearance, as nearly as may be, as the paper of the ballot, in such manner as to cover and wholly conceal said endorsement but not to injure or deface the same[.]" MCL 168.746.

MCL 168.747 provides:

> In case of a contested election, on the trial thereof before any court of competent jurisdiction, it shall be competent for either party to the cause to have produced in court the ballot boxes, ballots and poll books used at the election out of which the cause has arisen, and to introduce evidence proving or tending to prove that any person named on such poll lists was an unqualified voter at the election aforesaid, and that the ballot of such person was received. On such trial, the correspondence of the number endorsed on a ballot as herein provided with the number of the ballot placed opposite the name of any person on the poll lists shall be received as prima facie proof that such ballot was cast by such person: Provided, That the ballot of no person shall be inspected or identified under the provisions of this chapter unless such person shall consent thereto in writing, or unless such person has been convicted of falsely swearing in such ballot, or unless the fact that

---

[4] Any voter may be challenged under MCL 168.727. *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich 1, 14 n 24; 740 NW2d 444 (2007). Under MCL 168.727(1), an election inspector shall challenge an applicant applying for a ballot if the inspector knows or has good reason to know that the applicant is not a qualified and registered elector of the precinct. A registered elector of the precinct present in the polling place may challenge the right of anyone attempting to vote if the elector knows or has good reason to suspect that the individual is not a registered elector in that precinct. *Id.* Additionally, an election inspector or other qualified challenger may challenge the right of an individual attempting to vote who has previously applied for an absent voter ballot and who on election day is claiming to have never received the absent voter ballot or to have lost or destroyed the absent voter ballot. *Id.* These challenges shall not be made indiscriminately or without good cause. MCL 168.727(3). If a person attempting to vote is challenged, the person shall be sworn by one of the election inspectors to truthfully answer the questions asked of the person concerning the person's qualifications as an elector. MCL 168.729. If the person's answers to the questions show that the person is a qualified elector in the precinct, the person "shall be entitled to receive a ballot and vote." *Id.* The person's ballot shall be marked as required by MCL 168.745 and MCL 168.746, but it is counted as a regular ballot. MCL 168.727(2)(a); *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 14 n 24.

such person was an unqualified elector at the time of casting such ballot has been determined.[5]

See also *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich 1, 14 n 24; 740 NW2d 444 (2007) ("The ballot cast by a challenged voter is marked (and the mark subsequently concealed) with a number corresponding to the voter's poll list number, and is counted as a regular ballot. MCL 168.745; MCL 168.746. The marked ballot becomes relevant only in the event of litigation surrounding a contested election, where the challenged voter's qualifications to vote are disputed.").

According to the Priorities USA plaintiffs, following the passage of Proposal 3, the Secretary began to automatically register to vote those who conducted business with her regarding a driver's license or personal identification card if they were at least 17½ years of age (the AVR Policy). To support this claim, the Priorities USA plaintiffs provide a press release from the Secretary that announced that she had instituted automatic voter registration.[6] But the press release says nothing about automatic voter registration only applying to those who are at least 17½ years of age. However, the Secretary does not dispute the Priorities USA plaintiffs' claim.

II. PROCEDURAL HISTORY

On November 22, 2019, Priorities USA filed suit against the Secretary in the Court of Claims. An amended complaint was filed on January 21, 2020, by the Priorities USA plaintiffs.

---

[5] MCL 168.748 provides:

> After issue joined in any case of contested election, either party to the cause may present a petition to the court before which the said cause is to be tried, setting forth among other things that the petitioner has good reason to believe and does believe that 1 or more voters at the election out of which the cause has arisen, naming him or them, and stating his or their place of residence, were unqualified to vote at such election; that he believes the same can be established by competent testimony; that the ballot or ballots of such voter or voters were received after being challenged, as provided by law; and praying that the court may try and determine the question of the qualification of such voter or voters at said election, which petition shall be verified by the oath of the petitioner or some other person acquainted with the facts, and thereupon the court shall direct an issue to be framed, within a time to be fixed therefor, for the purpose of determining the question of the qualifications of the voter or voters named in said petition to vote at said election; and such issue shall stand for trial as in other cases, and the verdict of the jury or judgment of the court upon such issue so made shall be received, upon the trial of the principal issue in said cause, as conclusive evidence to establish or to disprove the said qualifications of said voter or voters.

[6] Secretary of State, *Secretary Benson Announces Modernized Voter Registration on National Voter Registration Day* <https://www.michigan.gov/sos/0,4670,7-127-1640_9150-508246--,00.html> (accessed July 14, 2020).

On January 6, 2020, PTV filed suit against the Secretary in the Court of Claims. PTV's complaint and the Priorities USA plaintiffs' amended complaint both advanced similar allegations. PTV and the Priorities USA plaintiffs asserted that the Legislature's proof of residency definition in MCL 169.497 and the requirement that some voters be issued a challenge ballot unduly burdened the self-executing provisions in 1963 Const, art 2, § 4. Additionally, the proof of residency definition violated the Equal Protection Clause of the Michigan Constitution by burdening the right to vote, and by treating similarly situated voters differently: those who registered to vote within the 14-day period, but who could not show proof of residency with a current Michigan driver's license or personal identification card were issued a challenged ballot. The Priorities USA plaintiffs finally asserted that the Secretary's AVR Policy burdened and curtailed the right in 1963 Const, art 2, § 4(1)(d).

Following the consolidation of the two cases, and the Legislature's intervention, the Legislature filed a motion for summary disposition under MCR 2.116(C)(10).[7] The Legislature argued that the proof of residency amendment in MCL 168.497 was a constitutional exercise of its power to preserve the purity of elections, guard against abuses of the elective franchise, and provide for a system of voter registration and absentee balloting. The Legislature further argued that the Michigan Constitution, following the passage of Proposal 3, did not define proof of residency, which essentially required the Legislature to exercise its constitutional powers to define the phrase. The definition of proof of residency did not violate the Equal Protection Clause because the statute provided reasonable, nondiscriminatory restrictions; thus, it was subject to only rational basis review. The state's interest in preventing voter fraud justified the restrictions. Finally, the Legislature argued that the AVR Policy was consistent with 1963 Const, art 2, § 4 because the right to be automatically registered to vote only applies to those who are entitled to register to vote, namely individuals who are 17½ years of age or older.

The Secretary also moved for summary disposition under MCR 2.116(C)(10). Regarding the AVR Policy, the Secretary was automatically registering individuals to vote pursuant to the Michigan Constitution and statute, not a policy. The Secretary also argued that the definition of proof of residency did not impose an unconstitutional burden on the right to vote because the Legislature properly supplemented 1963 Const, art 2, § 4. Furthermore, an individual can register to vote in the 14-day period by signing an affidavit that the individual does not have a form of identification for election purposes and by presenting a document from a broad array of documents listed in the statute. Relatedly, an individual whose ballot must be marked as a challenged ballot casts either a regular ballot or an absent voter ballot. The ballot is merely marked so that it can later be identified if an election is contested. A challenged ballot does not require the individual to reveal the content of the ballot. Individuals who cannot produce a current Michigan driver's license or personal identification card and are required to vote a challenged ballot are not denied equal protection. Individuals who must vote a challenged ballot are not similarly situated to individuals who have a current Michigan's driver's license or personal identification card. The

---

[7] The Court of Claims granted the Legislature's motion to intervene in lower court no. 19-000191-MZ, and the Priorities USA plaintiffs do not challenge that order on appeal.

use of alternative, and sometimes less objective, forms of proof of residency reasonably warrants additional procedural requirements.

In PTV's motion for summary disposition under MCR 2.116(C)(10), PTV argued that MCL 168.497 imposed additional obligations on the self-executing rights of 1963 Const, art 2, § 4. The term "residence" is generally understood as the place where a person lives. In MCL 168.497, the Legislature defined proof of residency to mean more than simply proof of where one lives. It defined proof of residency to include proof of identity, i.e., a driver's license or personal identification card. Although MCL 168.497 did not require a person registering to vote in the 14-day period to provide a current Michigan driver's license or personal identification card, the Legislature narrowly limited the documents that it would accept as proof of residency, which curtailed and burdened the rights guaranteed by 1963 Const, art 2, § 4. Additionally, under MCL 168.497, only those who provide a current Michigan driver's license or personal identification card receive a regular or absent voter ballot. All others receive a challenged ballot, which is not a regular or absent voter ballot and which is also not a secret ballot.

PTV also argued that MCL 168.497 failed to provide equal protection of the law. The statute creates three classes of voters: (1) those who present a current Michigan driver's license or personal identification card, and who are allowed to vote a regular or absent voter ballot; (2) those who either submit other proof of identity, or who execute an affidavit attesting that they do not possess any of the acceptable forms of proof of identity, with one of a limited number of documents establishing residency, and who are required to vote a challenged ballot, and (3) those who do not have one of the limited number of documents establishing residency, and who are not allowed to vote. MCL 168.497 imposed a severe burden on the rights of the voters in the second class. Those voters had to vote a challenged ballot, which required extra time by the clerk's office, which required the voters to wait longer. MCL 168.497 also imposed a severe burden on the rights of the voters in the third class. These voters were deprived of their right to vote, and there was no compelling state interest justifying the deprivation, according to PTV.

The Priorities USA plaintiffs moved for a preliminary injunction, attaching three affidavits from two students at the University of Michigan and one student at Michigan State University that detailed their difficulties in registering to vote in the 14-day period. The Priorities USA plaintiffs also attached a report from Michael E. Herron, Ph.D., which detailed the results from two surveys he commissioned. In the first survey, 2,000 Michigan residents, who were eligible to vote and planned to vote in 2020, were asked about whether they had the documents listed in MCL 168.497. According to Dr. Herron, 1.6% of the participants answered that they did not have documentation that would satisfy the requirements of MCL 168.497. 1.6% of citizens of voting age in Michigan is 159,320 individuals. According to Dr. Herron, the survey also showed that approximately 6% of the participants who were younger than 25 years of age lacked documentation that would satisfy the requirements of MCL 168.497. The participants in the second survey were students at Michigan colleges or universities. According to Dr. Herron, of the students who were United States citizens and not registered to vote in Michigan, 16.9% of them did not have documentation that would satisfy the requirements of MCL 168.497. Dr. Herron believed that approximately 15,514 of the college and university students in Michigan would not be able to provide proof of residency under MCL 168.497. Dr. Herron also reviewed records provided by the Secretary, which indicated that, in the five elections following the passage of Proposal 3, 264 individuals (94

of whom were 21 years of age or younger) were not able to register in the 14-day period for the upcoming election because they lacked proof of residency.

On June 24, 2020, the Court of Claims issued an opinion and order granting the Legislature's and the Secretary's motions for summary disposition, denying PTV's motion for summary disposition, and denying the Priorities USA plaintiffs' motion for a preliminary injunction. The Court of Claims first addressed the claim that the amendments of 1963 Const, art 2, § 4, following the passage of Proposal 3, were "self-executing" and that the requirements of MCL 168.497(2)-(5) were unconstitutional because they unduly restricted the new rights recognized in the Michigan Constitution. The Court of Claims held that while the Legislature may not enact laws that impose additional burdens on self-executing constitutional provisions, it may enact laws that supplement those provisions, such as laws that provide clarity and safeguard against abuses. Because the phrase proof of residency was undefined in Const 1963, art 2, § 4, and the residence of a voter is essential for voting purposes, the Legislature properly supplemented the constitutional provision when it defined proof of residency.

Next, the Court of Claims rejected the argument that the AVR Policy unduly burdened and curtailed the rights in 1963 Const, art 2, § 4. The AVR Policy was not a policy, but "rather a restatement of state law, specifically MCL 168.493a and MCL 168.492, and is consistent with the right of 'electors qualified to vote' being entitled to automatically register to vote when doing business with the secretary of state offices." Further, the Michigan Constitution defines an elector qualified to vote as any resident who has reached the age of 18, and a qualified voter may be automatically registered to vote as a result of conducting business with the secretary of state. Under MCL 168.492, an elector qualified to vote is someone 17½ years of age or older, "and nowhere does the Constitution grant individuals under the age of [17½] the right to be automatically registered when conducting business with the secretary of state."

The Court of Claims then addressed whether MCL 168.497 placed an unconstitutional burden on voters. The court noted that, although the right to vote was not enumerated in either the federal or state constitutions, the United States Supreme Court has held that citizens have a constitutionally protected right to participate in elections on an equal basis with other citizens in the jurisdiction. Furthermore, the court held, the right to vote is not absolute. A state has the power to impose voter qualifications and to regulate access to the franchise in many different ways. The court rejected the argument that the Legislature's definition of proof of residency in MCL 168.497 placed a severe burden on the constitutional right to register to vote in the 14-day period. The statute imposed some burden on voters—the statute requires an individual to bring to the election office or polling place some form of proof of residency. But, this was a reasonable, nondiscriminatory restriction, given the wide variety of documents that constituted acceptable ways to establish proof of residency. Additionally, if a voter did not have an acceptable proof of residency in the form of a driver's license or a personal identification card, "that person may vote with a challenged ballot that is counted that day, the same as all other ballots," so long as they produce one of the acceptable forms of proof of residency.

The Court of Claims also rejected the Priorities USA plaintiffs' suggestion that younger voters will be most harmed by MCL 168.497. First, because it was a facial challenge to MCL 168.497, there could not be a focus on any possible effects on a discrete population; the focus must be on the voting population as whole. Second, the argument "overlook[ed] the broad range of

documents that suffice under the statute, the majority of which are readily available to college students, and the fact that registration can be accomplished over the internet, something 'younger voters' are surely able to utilize." Third, the argument gave no credence to the young voters' ability to understand and follow clear voter registration procedures.

Finally, the Court of Claims rejected the argument that the requirement in MCL 168.497(5) that challenged ballots be issued to those who register to vote in the 14-day period without providing a current Michigan driver's license or personal identification card violates equal protection because it denied those voters the right to a secret ballot. The court reasoned that challenged ballots were treated the same as any other ballot on election day. "[D]espite [the challenged ballot] being marked on the outside as challenged, upon presentment of identification, the voter was eligible to receive, and did receive, a regular ballot," which complied with 1963 Const, art 2, § 4(1)(f). To the extent that any burden was placed on a voter's right, it was minimal. A challenged ballot was a secret ballot because it was counted in the same way as a normal ballot, and the contents were not revealed to the public. The Court of Claims explained:

> It is only in the event of a contested election, where the challenged ballot is at issue, that the ballot may be inspected or identified; however, this inspection may only occur with either: the voter's written consent; or only *after* the individual has been convicted of falsely swearing the ballot; or the voter was deemed to be unqualified. MCL 168.474. Therefore, the only way for the vote to be revealed—absent express written consent—is under court order and even then, only in two limited circumstances that require a prior determination of falsehood. This is not a severe burden, and it places no burden on the voter at the time of voting, nor does it impact the tabulation of those particular votes cast on election day.

> In contrast, the state has an interest in ensuring the integrity of ballots should it be needed. This specific interest is properly served by this regulation, as in the event of suspected voter fraud, the court may reveal the identity of the voter and a determination can be made. Overall, the burden imposed on voters' rights is minimal, and the legislation is within the scope of the state's interest in preserving the purity of elections.

Thus, the Court of Claims granted summary disposition in favor of the Legislature and the Secretary, and dismissed the complaints with prejudice. This appeal follows.

III. DISCUSSION

On appeal in Docket No. 353977, PTV argues that the Court of Claims erred in concluding that there is no constitutional right to vote; MCL 168.497 impermissibly imposed additional obligations on the self-executing provisions of 1963 Const, art 2, § 4(1)(a) and § 4(1)(f)(2); the requirement of issuing a challenged ballot was burdensome, unconstitutional, and served no legitimate state interest. In Docket No. 354096, the Priorities USA plaintiffs similarly argue that the Court of Claims erred in concluding that MCL 168.497 did not violate the self-executing provisions of 1963 Const, arts 1, § 2 and 2, § 4; the AVR Policy did not violate the self-executing provision of 1963 Const, art 2, § 4; and they were entitled to a preliminary injunction. We disagree.

-11-

A. STANDARD OF REVIEW

This Court reviews de novo a trial court's decision on a motion for summary disposition. *Ellison v Dep't of State*, 320 Mich App 169, 175; 906 NW2d 221 (2017). Summary disposition is proper under MCR 2.116(C)(10) if, "[e]xcept as to the amount of damages, there is no genuine issue as to any material fact, and the moving party is entitled to judgment or partial judgment as a matter of law."

This Court also reviews de novo questions of constitutional law. *Bonner v Brighton*, 495 Mich 209, 221; 848 NW2d 390 (2014). "A statute challenged on a constitutional basis is 'clothed in a presumption of constitutionality,' and the burden of proving that a statute is unconstitutional rests with the party challenging it." *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich 1, 11; 740 NW2d 444 (2007) (citation omitted).

A challenge to the constitutionality of a statute is either a facial challenge or an as-applied challenge. *Bonner*, 495 Mich at 223 nn 26-27; *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 11 & n 20. "A facial challenge is a claim that the law is invalid *in toto*—and therefore incapable of any valid application," whereas an as-applied challenge "considers the specific application of a facially valid law to individual facts." *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 11 & n 20 (quotation marks and citation omitted). The challenges to MCL 168.497 are facial challenges. PTV and the Priorities USA plaintiffs are asking that MCL 168.497(2)-(5) be declared unconstitutional in all circumstances. They do not claim the statute is unconstitutional only when applied in a specific circumstance.

"A party challenging the facial constitutionality of a [statute] 'faces an extremely rigorous standard.'" *Bonner*, 495 Mich at 223 (citation omitted). A plaintiff "must establish that no set of circumstances exists under which the act would be valid" and "[t]he fact that the . . . act might operate unconstitutionally under some conceivable set of circumstances is insufficient'" to render the act invalid. *Council of Orgs & Others for Ed About Parochiaid, Inc v Governor*, 455 Mich 557, 568; 566 NW2d 208 (1997) (quotation marks, alteration marks, and citation omitted). Indeed, "if any state of facts reasonably can be conceived that would sustain [a legislative act], the existence of the state of facts at the time the law was enacted must be assumed." *Id.* (quotation marks, alteration marks, and citation omitted). "[B]ecause facial attacks, by their nature, are not dependent on the facts surrounding any particular decision, the specific facts surrounding plaintiffs' claim are inapposite." *Bonner*, 495 Mich at 223.

B. CONSTITUTIONAL RIGHT TO VOTE

PTV and the Priorities USA plaintiffs argue that the Court of Claims erred by stating that the right to vote was not expressly enumerated in the Michigan Constitution. Before addressing this argument, we find it necessary to detail the history of the right to vote.

In the Court of Claims opinion and order, the court stated that "the right to vote is not enumerated in either the federal or state constitution . . . ." Although there are numerous provisions in the United States Constitution that prevent states from discriminating against specific groups by taking away their right to vote, there is no specific enumeration of the right to vote. See

-12-

San Antonio Indep Sch Dist v Rodriguez, 411 US 1, 35 n 78; 193 S Ct 1278; 36 L Ed 2d 16 (1973) ("[T]he right to vote, per se, is not a constitutionally protected right . . . ."). For example, the Fifteenth Amendment states: "The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude." US Const, Am XV. Nearly identical language is used in the Nineteenth and Twenty-Sixth Amendments, which prohibit denying or abridging the right to vote on the basis of gender or age, respectively. See US Const, Ams XIX and XXVI.

Despite the lack of a positive right to vote, the United States Supreme Court, "[i]n decision after decision, . . . has made clear that a citizen has a constitutionally protected right to participate in elections on an equal basis with other citizens in the jurisdiction." *Dunn v Blumstein*, 405 US 330, 336; 92 S Ct 995; 31 L Ed 2d 274 (1972). Indeed, "[n]o right is more precious in a free country than that of having a voice in the election of those who make the laws under which, as good citizens, we must live. Other rights, even the most basic, are illusory if the right to vote is undermined." *Wesberry v Sanders*, 376 US 1, 17; 84 S Ct 526, 534-535; 11 L Ed 2d 481 (1964). However, "[t]his equal right to vote is not absolute; the States have the power to impose voter qualifications, and to regulate access to the franchise in other ways." *Dunn*, 405 US at 336 (quotation marks and citation omitted).

Following the passage of Proposal 3 in Michigan, this state's constitution now reads: "Every citizen of the Unites States who is an elector qualified to vote in Michigan shall have the following rights: The right, once registered, to vote a secret ballot in all elections." 1963 Const, art 2, § 4(1)(a). Although decided before the passage of Proposal 3, and the relevant amendment of our state's constitution, our Supreme Court stated in *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 16, that "the right to vote is an implicit fundamental political right that is preservative of all rights." (Quotation marks and citation omitted). Our Supreme Court continued: "However, '[t]his equal right to vote is not absolute . . . .' " *Id.*, quoting *Dunn*, 405 US at 336 (alteration in original; internal quotation marks omitted).

PTV and the Priorities USA plaintiffs assert that 1963 Const, art 2, § 4(1)(a) provides a constitutional right to vote. This section unambiguously provides that a qualified citizen has the "right, once registered, to vote a secret ballot in all elections." 1963 Const, art 2, § 4(1)(a). However, this section does not provide that an individual has an absolute constitutional right to vote; the individual must first be a qualified elector who has registered to vote. *Id.* Although the Michigan Constitution now expressly provides for the right to vote, certain requirements must be met before an individual can exercise his or her fundamental political right to vote. Despite the Court of Claims' quotation of caselaw predating the passage of Proposal 3, the court's opinion recognized the constitutionally protected status of the right to vote. Thus, there is no error requiring reversal.

C. SELF-EXECUTING CONSTITUTIONAL PROVISIONS

PTV and the Priorities USA plaintiffs argue that the Legislature's definition of proof of residency in MCL 168.497 and the requirement in MCL 168.497(5) that a challenged ballot be issued to anyone who registers to vote in the 14-day period without providing a current Michigan driver's license or personal identification card unduly burden the rights in 1963 Const, art 2, § (4)(1)(f). They claim that, because the rights in 1963 Const, art 2, § 4(1) are self-executing

rights, the statutory provisions are unconstitutional. The Priorities USA plaintiffs also argue that the Secretary's AVR Policy unduly burdens the right in 1963 Const, art 2, § (4)(1)(d). We disagree.

There is no dispute among the parties that the rights in Const 1963, art 2, § 4(1) are self-executing. "A constitutional provision is deemed self-executing, if it supplies a sufficient rule, by means of which the right given may be enjoyed and protected, or the duty imposed may be enforced[.]" *League of Women Voters of Mich v Secretary of State*, ___ Mich App ___, ___; ___ NW2d ___ (2020) (Docket Nos. 350938, 351073); slip op at 11 (quotation marks and citation omitted). While the Legislature may not impose additional obligations on a self-executing constitutional provision, *Wolverine Golf Club v Secretary of State*, 384 Mich 461, 466; 185 NW2d 392 (1971); *Durant v Dep't of Ed (On Second Remand)*, 186 Mich App 83, 98; 463 NW2d 461 (1990), it may enact laws that supplement a self-executing constitutional provision, see *Wolverine Golf Club*, 384 Mich at 466. Statutes that supplement a self-executing constitutional provision may not curtail the constitutional rights or place any undue burdens on them. See *id.*; *Durant*, 186 Mich App at 98. Additionally, the statutes must be in harmony with the spirit of the Michigan Constitution and their object must be to further the exercise of the constitutional rights and make them more available. *League of Women Voters of Mich*, ___ Mich App at ___; slip op at 11. Statutes that supplement a self-executing provision may be desirable, "by way of providing a more specific and convenient remedy and facilitating the carrying into effect or executing of the rights secured, making every step definite, and safeguarding the same so as to prevent abuses." *Wolverine Golf Club v Secretary of State*, 24 Mich App 711, 730; 180 NW2d 820 (1970) (opinion by LESINSKI, C.J.), aff'd 384 Mich 461 (1971) (quotation marks and citation omitted).

1. PROOF OF RESIDENCY

Under 1963 Const, art 2, § 4(1)(f)(2), a person who seeks to register to vote "beginning on the fourteenth (14th) day before that election and continuing through the day of that election" must submit "a completed voter registration application" and provide "proof of residency." A person's residence, for purposes of Michigan election law, is the "place at which a person habitually sleeps, keeps his or her personal effects, and has a regular place of lodging. If a person has more than 1 residence . . . that place at which the person resides the greater part of the time shall be his or her official residence[.]" MCL 168.11(1). An individual may only vote in the township or city in which the individual resides. See MCL 168.491; MCL 168.492. Because an individual may only vote in the township where he or she resides, the individual's residence dictates which candidates and proposals the individual can vote for.

MCL 168.497(2) requires an individual who applies to register to vote in the 14-day period to provide proof of residency. This is not an additional requirement; 1963 Const, art 2, § 4(1)(f)(2) specifically provides that a person who registers to vote in the 14-day period must provide proof of residency. In MCL 168.497(2)-(5), the Legislature defined proof of residency. Because there is no definition of proof of residency in 1963 Const, art 2, § 4(1), the Legislature's definition of proof of residency is a law that supplements the constitutional provision.

A definition from the Legislature of proof of residency was desirable. *Wolverine Golf Club*, 24 Mich App at 730. Absent a statutory definition of proof of residency, confusion and disorder could arise during the 14-day period and on election day itself. Any person who wanted

to register to vote in the 14-day period would be left to wonder what documents would be accepted as proof of residency. Each city or township clerk would have to make his or her own determination regarding what is acceptable proof of residency. Under these individualized determinations, the documents that would be accepted as proof of residency could be different in each of Michigan's cities and townships. Consequently, a definition of proof of residency makes definite what documents an individual must bring to register to vote in the 14-day period and creates a uniform standard in each of Michigan's voting jurisdictions. *Id.* Furthermore, the Legislature has the constitutional authority under 1963 Const, art 2, § 4(2) to enact laws to preserve the purity of elections,[8] to guard against abuses of the elective franchise, and to provide for a system of voter registration and absentee voting. Accordingly, a legislative definition of proof of residency, which makes definite what documents can be used as proof of residency, is in harmony with the Legislature's obligations under the Michigan Constitution concerning the administration of elections and furthers the exercise of voter registration in the 14-day period. *League of Women Voters of Mich*, ___ Mich App at ___; slip op at 11.

Additionally, even though the Priorities USA plaintiffs have presented evidence that the Legislature's definition of proof of residency in MCL 168.497 has prevented, and may prevent, individuals who are qualified to vote from registering in the 14-day period, the Legislature's definition of proof of residency does not unduly burden the right to register to vote in the 14-day period. Under MCL 168.497, a person provides proof of residency if the person presents either of the following: (1) a current Michigan driver's license or personal identification card, MCL 168.497(2); (2) "any other form of identification for election purposes," which includes driver's licenses and personal identification cards issued by other states and student photo identification cards, see MCL 168.2(k), along with a current utility bill, a current bank statement, or a current paycheck, government check, or other government document, MCL 168.497(3); or (3) an affidavit indicating that the individual does not have "identification for election purposes" and a current utility bill, a current bank statement, or a current paycheck, government check, or other government document, MCL 168.497(4).

The Legislature's definition of proof of residency allows a person to register to vote in the 14-day period with a broad array of common, ordinary types of documents that are available to persons of all voting ages. The Legislature did not provide a narrow list of documents that individuals who register to vote in the 14-day period must present as proof of residency. Moreover, 1963 Const, art 2, § 4(1)(f) requires an individual to provide proof of residency when registering to vote in the 14-day period, and MCL 168.497(2)-(4) defines what documents are acceptable to fulfill that constitutional requirement. Because the Legislature's definition does not unduly burden the right to register to vote in the 14-day period, the definition is a proper supplement to 1963 Const, art 2, § 4(1)(f).

---

[8] "The phrase 'purity of elections' does not have a single precise meaning. However, it unmistakably requires fairness and evenhandedness in the election laws of this state." *Barrow v Detroit Election Comm*, 305 Mich App 649, 676; 854 NW2d 489 (2014) (quotation marks and citation omitted).

2. CHALLENGED BALLOTS

We reject the claims of PVT and the Priorities USA plaintiffs that MCL 168.497(5), which requires that a challenged ballot be issued to anyone who registers to vote in the 14-day period without providing a current Michigan driver's license or personal identification card, unduly burdens the rights in 1963 Const, art 2, § 4(1)(a) and (f). Under 1963 Const, art 2, § 4(1)(f), a person who registers to vote in accordance with that subsection "shall be immediately eligible to receive a regular or absent voter ballot." Under 1963 Const, art 2, § 4(1)(a), a voter is entitled to "a secret ballot."

Michigan election law defines a "regular ballot" as "a ballot that is issued to a voter on election day at a polling place location." MCL 168.3(h). An "absent voter ballot" is "a ballot that is issued to a voter through the absentee voter process." MCL 168.2(b). A challenged ballot is not a third type of ballot. Rather, a challenged ballot is either a regular ballot or an absent voter ballot that is marked (and the mark subsequently concealed) with the number corresponding to the voter's poll list number. See MCL 168.745; MCL 168.746; MCL 168.761(6); *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 14 n 24. Notably, a challenged ballot is entered and tabulated with all the other ballots that are cast. See MCL 168.497(5); *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 14 n 24.

Furthermore, a challenged ballot is a secret ballot. Generally, a secret ballot is one that prevents anyone else from knowing how the individual voted. See *Helme v Bd of Election Comm'rs of Lenawee Co*, 149 Mich 390, 391-393; 113 NW 6 (1907); *People v Cicott*, 16 Mich 283, 297 (1868), overruled on other grounds by *Petrie v Curtis*, 387 Mich 436 (1972). The mark on a challenged ballot, either before or after it is concealed, does not indicate to anyone how the individual voted. Long before Proposal 3 was passed, the Supreme Court recognized that 1963 Const, art 2, § 4 provided a right to a secret ballot. *Belcher v Mayor of Ann Arbor*, 402 Mich 132, 134; 262 NW2d 1 (1978). This right is not absolute; upon a showing that the voter acted fraudulently, the right can be abrogated. *Id.* ("We hold that a citizen's right to a secret ballot in all elections as guaranteed by Const 1963, art 2, § 4, cannot be so abrogated in the absence of a showing that the voter acted fraudulently."). In a contested election, a challenged ballot may be inspected. See MCL 168.747. But, it may only be inspected if the person consents, the person has been convicted of falsely swearing in such ballot, or if it has been determined that such person was an unqualified elector at the time of casting the ballot. *Id.* Because the right to a secret ballot is not absolute, the fact that a challenged ballot may be inspected in a contested election, MCL 168.474, does not mean that it is not a secret ballot.

3. AVR POLICY

The Secretary's AVR Policy does not unduly burden the right in 1963 Const, art 2, § 4(1)(d). Under 1963 Const, art 2, § 4(1), "[e]very citizen of the United States who is an elector qualified to vote in Michigan shall have [certain] rights[.]" In other words, the rights listed in 1963 Const, art 2, § 4(1), including "[t]he right to be automatically registered to vote as a result of conducting business with the secretary of state regarding a driver's license or personal identification card," are rights of "any citizen of the United States who is an elector qualified to vote in Michigan." An individual is not an elector qualified to vote in Michigan—and entitled to

-16-

the rights listed in 1963 Const, art 2, § 4(1)—until the individual reaches 18 years of age. See US Const, Am XXVI; 1963 Const, art 2, § 1; *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 at 47 n 1 (CAVANAGH, J., dissenting).

The AVR Policy, which allows those who are 17½ years of age or older to be automatically registered to vote as a result of conducting business with the Secretary regarding a driver's license or personal identification card, is consistent with MCL 168.492. The statute provides:

> Each individual who has the following qualifications of an elector is entitled to register as an elector in the township or city in which he or she resides. The individual must be a citizen of the United States; not less than 17-½ years of age; a resident of this state; and a resident of the township or city. [MCL 168.492.]

Because a person under the age of 18 is not an elector qualified to vote in Michigan, and because the AVR Policy is consistent with MCL 168.492, which allows an individual who is not less than 17½ years of age to register to vote, the argument that the AVR Policy unduly burdens the right in 1963 Const, art 2, § 4(1)(d) is without merit.

D. EQUAL PROTECTION

PTV and the Priorities USA plaintiffs argue that MCL 168.497 violates the Equal Protection Clause of the Michigan Constitution. 1963 Const, art 1, § 2 provides that "[n]o person shall be denied the equal protection of the laws; nor shall any person be denied the enjoyment of his civil or political rights or be discriminated against in the exercise thereof because of religion, race, color or national origin." The Equal Protection Clause in the Michigan Constitution is coextensive with the Equal Protection Clause of the United States Constitution. *Shepherd Montessori Ctr Milan v Ann Arbor Charter Twp*, 486 Mich 311, 318; 783 NW2d 695 (2010). Equal protection applies when a state either classifies voters in disparate ways or places undue restrictions on the right to vote. *Obama for America v Husted*, 697 F3d 423, 428 (CA 6, 2012).

The Priorities USA plaintiffs argue that MCL 168.497(5) violates equal protection because it treats similarly situated voters differently. According to them, although Const 1963, art 2, § 4(1)(f) guarantees that all individuals who register to vote in the 14-day period shall receive a regular or absent voter ballot, under MCL 168.497(5), only those who submit a current Michigan driver's license or personal identification card as their proof of residency receive a regular or absent voter ballot. PTV similarly argues that many people who register to vote in the 14-day period are denied the right to receive a regular or absent voter ballot. The basis for these arguments is that a challenged ballot does not constitute a regular or absent voter ballot. But, as previously discussed, a challenged ballot is a regular or absent voter ballot. As also laid out previously, a challenged ballot does not lose its character as a secret ballot unless the election is contested. Regardless how an individual provides proof of residency, as defined in MCL 168.497, the individual receives a regular or absent voter ballot that is also a secret ballot. Similarly situated voters are not treated differently under MCL 168.497(5).

The Priorities USA plaintiffs argue that the Legislature's definition of proof of residency in MCL 168.497 severely burdens the right to vote because it has, and will, disenfranchise

-17-

hundreds, if not thousands, of individuals in Michigan who are qualified to vote. According to the Priorities USA plaintiffs, strict scrutiny should be applied to the definition.

Every election law, "whether it governs the registration and qualifications of voters, the selection and eligibility of candidates, or the voting process itself, inevitably affects—at least to some degree—the individual's right to vote and his right to associate with others for political ends." *Anderson v Celebrezze*, 460 US 780, 788; 103 S Ct 1564; 75 L Ed 2d 547 (1983).[9] Consequently, subjecting every voting regulation to strict scrutiny, thereby requiring that the regulation be narrowly tailored to advance a compelling state interest, would tie the hands of states seeking to assure that elections are operated equitably and efficiently. *Burdick v Takushi*, 504 US 428, 433; 112 S Ct 2059; 119 L Ed 2d 245 (1992). In *Burdick*, the United States Supreme Court held that "a more flexible standard" applies:

> A court considering a challenge to a state election law must weigh the "character and magnitude of the asserted injury to the rights protected by the First and Fourteenth Amendments that the plaintiff seeks to vindicate" against "the precise interests put forward by the State as justifications for the burden imposed by its rule," taking into consideration "the extent to which those interests make it necessary to burden the plaintiff's rights."

> Under this standard, the rigorousness of our inquiry into the propriety of a state election law depends upon the extent to which a challenged regulation burdens First and Fourteenth Amendment rights. Thus, as we have recognized when those rights are subjected to "severe" restrictions, the regulation must be "narrowly drawn to advance a state interest of compelling importance." But when a state election law provision imposes only "reasonable, nondiscriminatory restrictions" upon the First and Fourteenth Amendment rights of voters, "the State's important regulatory interests are generally sufficient to justify" the restrictions. [*Id.* at 434 (citations omitted).]

See also *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 21-22, where the Supreme Court, after quoting these two paragraphs, stated:

> Thus, the first step in determining whether an election law contravenes the constitution is to determine the nature and magnitude of the claimed restriction inflicted by the election law on the right to vote, weighed against the precise interest identified by the state. If the burden on the right to vote is severe, then the

---

[9] Regardless whether the right to vote, following the passage of Proposal 3, is now an expressly enumerated right in the Michigan Constitution, the United States Supreme Court has recognized that the right to vote is a " 'a fundamental political right' " that "is preservative of other basic and civil political rights." *Reynolds v Sims*, 377 US 533, 562; 84 S Ct 1362; 12 L Ed 2d 506 (1964) (citation omitted). A citizen has "a constitutionally protected right to participate in elections on an equal basis with other citizens in the jurisdiction." *Dunn*, 405 US at 336. The right to vote, however, is not absolute; a state has the power to impose voter qualifications, and to regulate access to the franchise in other ways. *Id.*; see also 1963 Const, art 2, § 4(2).

regulation must be "narrowly drawn" to further a compelling state interest. However, if the restriction imposed is reasonable and nondiscriminatory, then the law is upheld as warranted by the important regulatory interest identified by the state. The United States Supreme Court has stressed that each inquiry is fact and circumstance specific, because "[n]o bright line separates permissible election-related regulation from unconstitutional infringements[.]" [Citation omitted.]

In resolving an equal protection challenge to an election law under the Michigan Constitution, this Court applies the *Burdick* test. *Id.* at 35.

The Legislature's definition of proof of residency does not impose a severe burden on the right to vote. Because Const 1963, art 2, § 4(1) does not define proof of residency, the Legislature provided a definition in MCL 168.497, and the Legislature's definition allows individuals to provide proof of residency with a broad array of ordinary, common documents that are available to persons of all voting ages. The Priorities USA plaintiffs have presented evidence that there are individuals who are qualified to vote and who could not provide proof of residency, as defined in MCL 168.497, in the 14-day period leading up to the March 2020 presidential primary.

However, in arguing that the Legislature's definition of proof of residency has, and will, disenfranchise these individuals, the Priorities USA plaintiffs fail to recognize that an individual can register to vote in several ways. An individual can register to vote by mailing a completed voter registration application on or before the 15th day before the election. 1963 Const, art 2, § 4(1)(e). An individual can register to vote by appearing in person and submitting a completed voter registration application on or before the 15th day before the election. 1963 Const, art 2, § 4(1)(f)(1). See also MCL 168.497(1), which allows an individual to register to vote in person, by mail, or online until the 15th day before the election. Additionally, an individual can register to vote in the 14-day period by appearing in person, submitting a completed voter registration application, and providing proof of residency. 1963 Const, art 2, § 4(1)(f)(2).

The Priorities USA plaintiffs make no claim that any person who is unable to provide proof of residency, as defined in MCL 168.497, in the 14-day period would not be able to register to vote on or before the 15th day before the election. Notably, election days are set by the Michigan Constitution and by statute. See 1963 Const, art 2, § 5; MCL 168.641. Consequently, one should not be uninformed regarding when an election is to be held. Furthermore, it is not unreasonable to expect an individual who wishes to vote in an election, but who is not registered to vote or who has moved since registering to vote, to make inquiries or conduct research—in advance of the election—regarding how to register to vote. In doing so, an individual can learn the different options for registering to vote and the documents that are needed for each method. These inquiries are not a severe or substantial burden. Cf. *Crawford v Marion Co Election Bd*, 553 US 181, 198; 128 S Ct 1610; 170 L Ed 2d 574 (2008) (opinion by STEVENS, J.) (indicating that the inconvenience for those who need a photo identification to vote by gathering the required documents, making a trip to the bureau of motor vehicles, and posing for a photograph does not qualify as a substantial burden); *id.* at 205 (SCALIA, J., concurring) (stating that burdens are severe if they go beyond the merely inconvenient and that "[o]rdinary and widespread burdens, such as those requiring 'nominal effort' of everyone, are not severe") (citation omitted). Furthermore, while the Priorities USA plaintiffs claim that the Legislature's definition of proof of residency is narrow, they make no claim that a more expansive list of specific documents, such as those which the Secretary allows

to constitute proof of residency when one applies for a driver's license or personal identification card,[10] would allow a significant number of individuals who cannot provide proof of residency, as defined by MCL 168.497, to provide it.

The Legislature's definition of proof of residency in MCL 168.497 is a reasonable, nondiscriminatory restriction that applies to all individuals who seek to register to vote in the 14-day period. See *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 497 Mich at 25. It does not, therefore, violate equal protection of the laws.

Furthermore, the Legislature's definition of proof of residency is warranted by the state's regulatory interests. *Id.* at 22. The Legislature has constitutional authority to enact laws to preserve the purity of elections, to guard against abuses of the elective franchise, and to provide for a system of voter registration and absentee voting. 1963 Const, art 2, § 4(2). These obligations include ensuring that fraudulent voting does not dilute the votes of lawful voters. *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 497 Mich at 19-20. Because a person's residence dictates which candidates and proposals the person can vote for, see MCL 168.492, the Legislature has an interest in ensuring that only residents of a city or township vote in that city or township. By defining proof of residency, a phrase undefined by 1963 Const, art 2, § 4(1), the Legislature has enacted a statute that helps to preserve the purity of elections and aids in providing for a system of voter registration. The clerks of Michigan's cities and townships, as well as those qualified to vote in Michigan, now know what documents are needed to establish proof of residency in the 14-day period.

Furthermore, the Legislature's definition of proof of residency is a reasonable means to prevent voter fraud. By defining proof of residency as requiring either a current Michigan driver's license or personal identification or a utility bill, bank statement, paycheck, government check, or other government document with the person's name and current address, the Legislature has required the person to provide a document—created by a neutral, detached third party—that connects the person with their place of residence.

We reject the Priorities USA plaintiffs' claim that voter fraud does not justify the Legislature's definition of proof of residency because voter fraud is not a problem in Michigan and there is no reason to believe that voter fraud would be more prevalent during the 14-day period than in any preceding period. Recall that it is the Michigan Constitution that requires different treatment of persons who register to vote in person on or before the 15th day before the election and those who register in the 14-day period. See 1963 Const, art 2, § 4(1)(f).[11] Additionally, the

---

[10] These documents include a credit card bill, bank statement, Michigan school transcript, mortgage, lease, or rental agreement, insurance policy, and vehicle title and registration. See Michigan Secretary of State, *Driver's License or ID Requirements*, SOS-428 (June 2020).

[11] "[T]he primary objective of constitutional interpretation, not dissimilar to any other exercise in judicial interpretation, is to faithfully give meaning to the intent of those who enacted the law." *Nat'l Pride at Work, Inc v Governor*, 481 Mich 56, 67; 748 NW2d 524 (2008). Under 1963 Const, art 2, § 4(1)(f), when a person registers to vote in person, the documents that the person must present to the election official depends on when the person registers to vote. If the person registers

Legislature was not required to wait until there was proven voter fraud during the 14-day period before it could enact a definition of proof of residency. See *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 26-27, where the Supreme Court rejected the argument that the state's interest in preventing in-person voter fraud was illusory because there was no significant evidence of such fraud:

> [T]here is no requirement that the Legislature "prove" that significant in-person voter fraud exists before it may permissibly act to prevent it. The United States Supreme Court has explicitly stated that "elaborate, empirical verification of the weightiness of the State's asserted justifications" is *not required.* Rather, a state is permitted to take prophylactic action to respond to potential electoral problems:
>
> > To require States to prove actual [harm] as a predicate to the imposition of reasonable . . . restrictions would invariably lead to endless court battles over the sufficiency of the "evidence" marshaled by a State to prove the predicate. Such a requirement would necessitate that a State's political system sustain some level of damage before the legislature could take corrective action. Legislatures, we think, should be permitted to respond to potential deficiencies in the electoral process with foresight rather than reactively, provided that the response is reasonable and does not significantly impinge on constitutionally protected rights.
>
> Therefore, the state is not required to provide *any* proof, much less "significant proof," of in-person voter fraud before it may permissibly take steps to prevent it. [Citations omitted.]

We also reject the Priorities USA plaintiffs' claim that the Legislature's definition of proof of residency was not justified because other statutes adequately prevent voter fraud. They point to MCL 168.933, which provides that "[a] person who makes a false affidavit or swears falsely while under oath . . . for the purpose of securing registration, for the purpose of voting at an election . . . is guilty of perjury."   In *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 28 n 69, the Supreme Court rejected a similar argument that the picture identification requirement of MCL 168.523(1) was not justified because there were statutes that imposed criminal penalties for those who impersonated another for voting purposes. It explained:

---

to vote on or before the 15th day before the election the person must submit "a completed voter registration application." 1963 Const, art 2, § 4(1)(f)(1). But, if the person registers to vote during the 14-day period, the person must submit "a completed voter registration application" and provide "proof of residency." 1963 Const, art 2, § 4(1)(f)(2). Consequently, it is apparent that the voters who enacted Proposal 3 intended that those who register to vote in the 14-day period must provide additional documentation than those who register to vote on or before the 15th day before the election—in addition to submitting a completed voter registration application, they must also provide proof of residency.

-21-

> [T]hat Michigan criminalizes in-person voter fraud does not address Michigan's undisputed interest in *preventing* fraud in the first instance, nor do criminal sanctions provide a means of *detecting* fraud. Moreover, it is unclear how the imposition of criminal penalties could remedy the harm inflicted on our electoral system by a fraudulently cast ballot. [*Id.*]

Accordingly, MCL 168.933 does not dispel the Legislature's interest in preventing voter fraud during the 14-day period.

Finally, PTV, in arguing that MCL 168.497 violates equal protection, focuses on the burden that is caused by the actual issuance of challenged ballots. According to PTV, because it takes longer for a challenged ballot to be issued, which results in longer lines, the requirement that challenged ballots be issued to those who register in the 14-day period without a current Michigan driver's license or personal identification card burdens the right to vote.

The burden of long lines, which results in people having to wait longer to register to vote, is not a severe burden. Long lines are certainly an inconvenience, but a burden must go beyond mere inconvenience to be severe. *Crawford*, 553 US at 205 (SCALIA, J., concurring). Additionally, the burden is justified by the state's interest in preventing voter fraud. See *In re Request for Advisory Opinion Regarding Constitutionality of 2005 PA 71*, 479 Mich at 19-20. The challenged ballot provides a procedure, in a contested election, to identify a ballot that was cast by someone who engaged in voter fraud. See MCL 168.747; *Belcher*, 402 Mich at 132. It was reasonable for the Legislature to conclude that it was less likely that those persons who register to vote in the 14-day period with a current Michigan driver's license or identification card would be committing fraud than those who register without one. Those who register to vote with a current Michigan driver's license or personal identification card have a government issued identification that contains their picture and their current address. But someone who registers to vote by providing "any other form of identification for election purposes," may have picture identification with a noncurrent address, such as a driver's license or personal identification card issued by another state, or no address for the person, such as a student photo identification card, and someone who registers to vote by submitting an affidavit that he or she does not have "identification for election purposes" simply provides no photo identification at all.

IV. RESPONSE TO THE DISSENT

Our dissenting colleague concedes that the Legislature was within its rights to establish what constitutes "proof of residency" within the 14-day period. Indeed, the dissent states that the Legislature "can and should" provide guidance as to what is acceptable proof of residency. By making this concession, our colleague must also acknowledge that the legislative choice reflected in MCL 168.497 represents a considered policy judgment of the political branches of our government. That policy judgment is one with which our dissenting colleague clearly disagrees. Indeed, our colleague states that she might have upheld the statute had the Legislature enacted a definition of proof of residency more in line with what she considers to be its "well-understood

-22-

meaning."[12] But in our view it is not part of the judicial role to second guess the Legislature's policy judgment in this regard, so long as what has been enacted does not run afoul of the constitution. See *State Farm Fire & Cas Co v Old Republic Ins Co*, 466 Mich 142, 149; 644 NW2d 715 (2002) ("It is not the role of the judiciary to second-guess the wisdom of a legislative policy choice; our constitutional obligation is to interpret—not to rewrite—the law."). We have laid out in painstaking detail why the statutory enactments at issue in this case are well within constitutional bounds.

Finally, the dissent posits that there is a well-accepted meaning of the term "proof of residency." If so, why should the Legislature have need of defining the term, as the dissent concedes that it "can and should" have done? More fundamentally, we disagree that the Legislature has substituted "proof of identity" for "proof of residency." In the context of this statute, a State of Michigan driver's license or personal identification card is being used not as proof of identity, but as proof of residency. Indeed, the Legislature considers it to be the highest and best proof of residency, as a prospective voter need not supply any other documentation within the 14-day period so long as the voter presents either of those documents reflecting an address within the voting jurisdiction.

V. CONCLUSION

We affirm the June 24, 2020 opinion and order of the Court of Claims. The Secretary and the Legislature were entitled to summary disposition. The Legislature's definition of proof of residency in MCL 168.497 and the requirement in MCL 168.497(5) that a challenged ballot be issued to any person who registers to vote in the 14-day period without providing a current Michigan driver's license or personal identification card does not unduly burden any of the rights in 1963 Const, art 2, § 4(1)(a) and (f). The Secretary's AVR Policy also does not unduly burden the right in 1963 Const, art 2, § 4(1)(d). Additionally, the Legislature's definition of proof of residency in MCL 168.497 and the requirement in MCL 168.497(5) concerning the issuance of challenged ballots do not violate equal protection.

Affirmed.

/s/ Patrick M. Meter
/s/ Michael F. Gadola

---

[12] The dissent lays out the list of documents the Secretary of State accepts as proof of residency when seeking to obtain a driver's license or personal identification card, which is more expansive than the list in MCL 169.497. First, given the Legislature's duty to preserve the purity of elections, and to ensure that the votes of qualified electors are not unfairly diluted, the Legislature was within its rights to require a higher standard of proof of residency for voting purposes than for driving purposes. As to the dissent's argument that the list the Legislature chose discriminates on the basis of income, we note that the more expansive list the dissent appears to prefer includes items such as utility bills, bank statements, mortgages, pay stubs, life insurance policies, and other documents that presume a certain economic status. This appears unavoidable in any scheme designed to establish a person's residency.

ORIGIN ID:FAYA (617) 727-2200
JAIDEEP CHAWLA

1 ASH BURTON PL

BOSTON, MA 02108
UNITED STATES US

SHIP DATE: 12NOV20
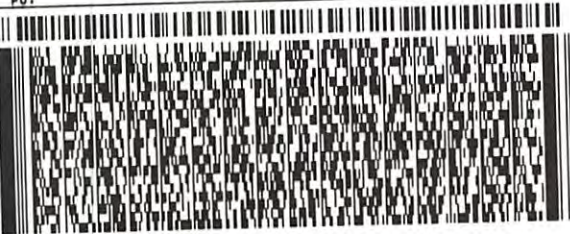ACTWGT: 2.90 LB
CAD: 6997581/SSF02121

Part # 156297

0 **ATTN CLERK OF THE COURT**
   UNITED STATES DISTRICT COURT
   800 FRANKLIN AVE RM 380

   WACO TX 76701
   (000) 000-0000   REF:
   INV: DEPT:
   PO:

FedEx
Express

E

REL#
3785346

TRK# 3988 7028 7584
0201

FRI — 13 NOV 4:30P
STANDARD OVERNIGHT

XH ACTA

76701
TX-US **AUS**